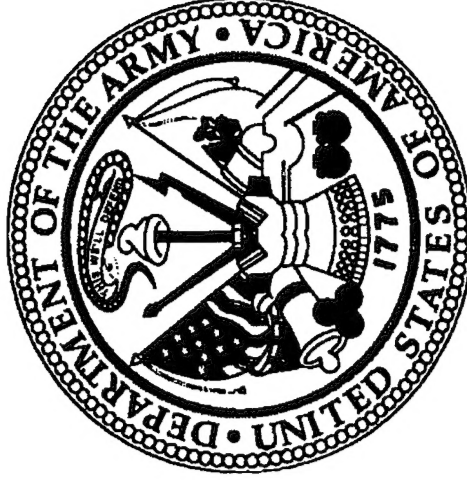


DEPARTMENT OF THE ARMY

Procurement Programs



DTIC QUALITY INSPECTED 2

19980305 069

Committee Staff Procurement Backup Book
FY 1999 Budget Estimates

MISSILE PROCUREMENT, ARMY

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APPROPRIATION

February 1998

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DEPARTMENT OF THE ARMY
FY 99 PROCUREMENT PROGRAM

EXHIBIT P-1
February 1998

Appropriation: **MISSILES**

Activity: 2. **OTHER MISSILES**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97			FY 98		
				QTY	COST		QTY	COST	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	SURFACE-TO-AIR MISSILE SYSTEM								
1	ENHANCED FIBER OPTIC GUIDED MISSILE (EFOGM) (H03100)	A	142,875			96	12,942	96	13,716
2	AVENGER SYSTEM SUMMARY (C14900)		1,856,263	93	62,355		7,200	19	35,269
	SUB-ACTIVITY TOTAL				62,355		20,142		48,985
	AIR-TO-SURFACE MISSILE SYSTEM								
3	HELLFIRE SYS SUMMARY (C70000)	A	180,312	2,856	356,399	1,100	242,271	2,000	360,625
	SUB-ACTIVITY TOTAL				356,399		242,271		360,625
	ANTI-TANK/ASSAULT MISSILE SYSTEM								
4	JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007) LESS: ADVANCE PROCUREMENT (PY)		96,498	1,020	160,043	1,080	173,858 -34,717	3,316	319,988
					160,043		139,141		319,988
5	JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007) ADVANCE PROCUREMENT (CY)				34,717		1,190		
6	TOW 2 SYSTEM SUMMARY (C59300)	A			9,385				
7	MLRS ROCKET (C65400)		31,634	1,500	45,318	528	19,327	522	16,513
8	MLRS LAUNCHER SYSTEMS (C66400)		3,557,791		103,565	35	118,710	24	85,387

DEPARTMENT OF THE ARMY
FY 99 PROCUREMENT PROGRAM

EXHIBIT P-1
February 1998

Appropriation: **MISSILES**

Activity: 2. **OTHER MISSILES**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97		FY 98		FY 99	
				QTY	COST	QTY	COST	QTY	COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
9	ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)	B	943,593	97	135,311	100	93,537	96	90,585
10	ATACMS/BAT (CA6101)	A	1,636,100					30	49,083
11	BAT (CA6100)	A	239,107					420	100,425
	SUB-ACTIVITY TOTAL				488,339		371,905		661,981
	ACTIVITY TOTAL				907,093		634,318		1,071,591

DEPARTMENT OF THE ARMY
FY 99 PROCUREMENT PROGRAM

EXHIBIT P-1
February 1998

Appropriation: **MISSILES**

Activity: 3. **MODIFICATIONS**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97			FY 98		
				QTY	COST		QTY	COST	
(1)	(2)	(3)	(4)	(5)	(6)		(7)	(8)	(9)
									(10)
	MODIFICATIONS								
12	PATRIOT MODS (C50700)				23,283			7,784	15,259
13	STINGER MODS (C20000)				37,184			21,126	13,924
14	AVENGER MODS (CE8710)								8,425
15	ITAS/TOW MODS (C61700)				16			61,061	62,478
16	DRAGON MODS (C57300)				4,921				
17	MLRS MODS (C67500)				6,397			2,129	2,193
	SUB-ACTIVITY TOTAL				71,801			92,100	102,279
	ACTIVITY TOTAL				71,801			92,100	102,279

DEPARTMENT OF THE ARMY
FY 99 PROCUREMENT PROGRAM

EXHIBIT P-1
February 1998

Appropriation: **MISSILES**

Activity: 4. **SPARES AND REPAIR PARTS**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97		FY 98		FY 99	
				QTY	COST	QTY	COST	QTY	COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	SPARES AND REPAIR PARTS								
18	SPARES AND REPAIR PARTS (CA0250)				10,300		11,074		23,718
	SUB-ACTIVITY TOTAL				10,300		11,074		23,718
	ACTIVITY TOTAL				10,300		11,074		23,718

Appropriation: **MISSILES**

Activity: 5. SUPPORT EQUIPMENT AND FACILITIES**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97			FY 98		
				QTY	COST	QTY	COST	QTY	COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	SUPPORT EQUIPMENT AND FACILITIES								
19	AIR DEFENSE TARGETS (C93000)				6,190		971		2,534
20	ITEMS LESS THAN \$2.0M (MISSILES) (CL2000)				989		928		922
21	MISSILE DEMILITARIZATION (HL2000)				1,529		1,466		1,466
22	PRODUCTION BASE SUPPORT (CA0100)				1,709		3,274		3,258
23	CLOSED ACCOUNT ADJUSTMENTS (CX9999)				3,402				
	SUB-ACTIVITY TOTAL				13,819		6,639		8,180
	ACTIVITY TOTAL				13,819		6,639		8,180
	APPROPRIATION TOTAL				1,003,013		744,131		1,205,768

Exhibit P-1M, Procurement Programs - Modification Summary

System/Modification	(TOA, Dollars in Millions)									Total Program
	Prior 1996 &	1997	1998	1999	2000	2001	2002	2003	To Complete	
PATRIOT MODS (C50700)										
RLCEU										119.6
Block VII	10.2	11.1	2.9	8.8	12.1	14.6	14.7	11.6	54.9	21.7
Weapon Control Computer (WCC) Upgrade	56.0		0.4							56.0
CDI Phase I	3.8	0.3								4.1
Block VIII (RAM Mods)			4.5	6.5	7.0	9.0	4.5	3.8	126.0	161.3
Integrated Diagnostic Support System		6.1			4.7	3.1				13.9
Gem Plus/Minus		5.8								5.8
RLCEU (LINK 16/JTIDS)					2.6	2.6				5.2
Total	70.0	23.3	7.8	15.3	26.4	29.3	19.2	15.4	180.9	387.6
STINGER MODS (C20000)										
Stinger Block I Missile Upgrades	10.3	31.4	17.2	13.9	19.6	26.3	31.6	26.1		176.4
Stinger Block I Platform Upgrades		5.8	3.9							9.7
Bradley Linebacker	1.5									1.5
Total	11.8	37.2	21.1	13.9	19.6	26.3	31.6	26.1		187.6
AVENGER MODS (CE8710)										
AVENGER SLEW-TO-CUE				8.4	8.5	7.0	15.8	2.9		42.7
Total				8.4	8.5	7.0	15.8	2.9		42.7
ITAS/TOW MODS (C61700)										
MISSILE CONVERSION (HEAT TO PRACTICE)	4.9			1.6				5.4		11.9
MISSILE MODIFICATIONS (MOIC)	0.4			0.4				0.4		1.2
ITAS (IMPROVED TARGET ACQUISITION SYSTEM)	36.0		61.1	60.5	62.8	62.0	65.5	51.9		399.8
Total	41.3		61.1	62.5	62.8	62.0	65.5	57.7		412.9
MLRS MODS (C67500)										
Improved Electronic Unit (IEU)	71.6									71.6

Exhibit P-1M, Procurement Programs - Modification Summary

System/Modification	(TOA, Dollars in Millions)										Total Program
	1996 &										
	Prior	1997	1998	1999	2000	2001	2002	2003	To Complete		
Launcher Loader Module Improvements (LLM)	33.3	0.2								33.5	
Carrier Improvements Phase IV	3.5	1.0								4.5	
Transmission Electronic Controller (TEC)	26.7	0.3								27.0	
Fire Suppression Change		0.9	1.9	0.1	0.2	0.2				3.3	
Interim IPDS Launcher	16.3	3.3		1.3	1.2	1.2	1.2	1.2		25.7	
Interim MS Launcher	9.9									9.9	
Hoist Carriage Assembly	2.7									2.7	
Selective Availability Anti-Spoofing Module (SAASM)					0.4	2.9				3.3	
JTA-A							2.1	2.8		4.9	
Obsolescence Mitigation/ECP Reliability Integration	3.3	0.7	0.2	0.8	0.4	0.9	1.0	1.2		8.5	
Total	167.3	6.4	2.1	2.2	2.2	5.2	4.3	5.2		194.9	
Grand Total	290.4	66.9	92.1	102.3	119.5	129.8	136.4	107.3	180.9	1225.7	

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No.												P-1 Item Nomenclature:	
MISSILE PROCUREMENT / 2 / Other Missiles												ENHANCED FIBER OPTIC GUIDED MISSILE (EFO (H03100))	
Program Elements for Code B Items:												Other Related Program Elements:	
0603313A/D496												NONE	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty					96	96						192	
Gross Cost	0.0	0.0	0.0	0.0	12.9	13.7	0.0	0.0	0.0	0.0	0.0	26.7	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	0.0	0.0	0.0	0.0	12.9	13.7	0.0	0.0	0.0	0.0	0.0	26.7	
Initial Spares													
Total Proc Cost	0.0	0.0	0.0	0.0	12.9	13.7	0.0	0.0	0.0	0.0	0.0	26.7	
Flyaway U/C													
Wpn Sys Proc U/C													

DESCRIPTION: EFOGM is the primary "killer" within the OSD approved Rapid Force Projection Initiative (RFPI) ACTD. The EFOGM system is a multi-purpose, precision kill weapon system. EFOGM is a day/night, adverse weather capable system that allows the maneuver commander to extend the battle space beyond line of sight to ranges up to 15 kilometers, thus reducing the exposure of the gunner and allowing targets to be taken out of the battle early. The system consists of a gunner's station, a tactical missile, and a fiber optic data link plus command vehicles. The missile can navigate to the target area automatically, and the gunner can intervene at any time to lock on and engage any detected targets. This gunner in the loop capability enhances the target acquisition process and minimizes fratricide and collateral damage, so important in urban warfare. The gunner views the flight path and target via a seeker on the missile linked to the gunner's video console. The missile incorporates an IR imaging seeker and a variety of advanced targeting functionalities.

JUSTIFICATION: EFOGM will give light forces the ability to engage and defeat threat armored combat vehicles, other high value ground targets, and hovering or moving rotary wing aircraft that may be masked from line of sight direct fire weapon systems. FY99 buys 96 EFOGM missiles and provides for refurbishment of fire units evaluated during RFPI large-scale field experiment.

NOTE: EFOGM, is an RDT&E funded Advanced Concept Technology Demonstration (ACTD). As directed by congressional language, procurement funding buys limited residual end-items which will not be consumed during testing and will be left as "go-to-war" assets. The FY98 DoD Appropriations Act transferred \$13.3M from RDT&E into this missile procurement budget line for fabrication of missiles not used in test.

Exhibit P-5, Weapon Missiles Cost Analysis				Appropriation/ Budget Activity/Serial No: MISSILE PROCUREMENT / 2 / Other Missiles				P-1 Line Item Nomenclature: ENHANCED FIBER OPTIC GUIDED MISSILE (EFO (H03100))				Weapon System Type:		Date: February 1998		
Missiles Cost Elements				FY 96		FY 97		FY 98		FY 99						
				TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each					UnitCost \$000
EFOGM Missiles																
Fire Unit Refurbishment																
TOTAL																

Exhibit P-5a, Budget Procurement History and Planning										Date:
Appropriation / Budget Activity/Serial No:		Weapon System Type:		P-1 Line Item Nomenclature:						Date:
MISSILE PROCUREMENT / 2 / Other Missiles				ENHANCED FIBER OPTIC GUIDED MISSILE (EFO (H03100))						
WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
Fiscal Years										
EFOGM Missiles	Raytheon ESD, Huntsville, AL	TBD	DSA, AMCOM	Jul-98	Jul-99	96	135	N/A	N/A	Mar-94
FY 98	Raytheon ESD, Huntsville, AL	TBD	DSA, AMCOM	Jan-99	Jan-00	96	138	N/A	N/A	Mar-94
FY 99										
REMARKS: The EFOGM RDT&E CPIF Advanced Technology Demonstration contract was competitively awarded to Raytheon on 16 May 95. Current contract will be modified to add FY 98 procurement funding for 96 missiles; funds will be obligated during July 98.										

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No.												February 1998
MISSILE PROCUREMENT / 2 / Other Missiles												
P-1 Item Nomenclature:												
Other Related Program Elements:												
C16000 AVENGER PEDESTAL MOUNTED STINGER, C16200 AVENGER TRAINING DEVICES, CE8710 AVENGER MODS												
Code: A												
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty	773		93		19	19	22	22	21		969	
Gross Cost	838.2	62.5	62.4	7.2	35.3	35.1	35.0	34.8	34.7	0.0	1175.7	
Less PY Adv Proc	90.4	32.5									122.9	
Plus CY Adv Proc	122.9										122.9	
Net Proc (P-1)	870.7	30.0	62.4	7.2	35.3	35.1	35.0	34.8	34.7	0.0	1175.7	
Initial Spares	56.4	4.5									60.9	
Total Proc Cost	927.1	34.5	62.4	7.2	35.3	35.1	35.0	34.8	34.7	0.0	1236.6	
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The AVENGER System is a lightweight, highly mobile/transportable surface-to-air missile/gun weapon system mounted on a High Mobility Multi-purpose Wheeled Vehicle (HMMWV). It is operated by a two man crew for defense against helicopters and fixed wing aircraft at low altitude, day or night, and in clear or adverse weather. The system incorporates an operator's position with controls, displays, fire control electronics, and the Standard Vehicle Mounted Launcher (SVML). The SVML includes seeker coolant bottles and related hardware and it supports and launches multiple STINGER missiles. The SVML provides output signals that can be used to display to the gunner exactly where the STINGER is pointed. The driven sight reticule capability aids the gunner in severe background clutter and Electro-magnetic Counter Measure (ECM) environments. The system operates with standard unmodified Basic STINGER, STINGER-POST or STINGER-RMP missiles rounds, and the high rate of fire .50 CAL machine gun. AVENGER fills the Line-of-Sight Rear (LOS-R) role in Forward Area Air Defense Systems (FAADS).

A five year multiyear procurement (MYP) contract for AVENGER began in FY 91. In 1994, Congress agreed to a provision in the FY96 budget that would grant a one year extension, at no additional cost, for extending the delivery schedule of AVENGER multiyear procurement authority so the Marine Corps and other services could take advantage of the Army's contract and favorable pricing terms. The Avenger program received funds in FY 97 to procure the remainder of the multi-year procurement (93 fire units). Additional Fire Units have been funded in FY 00-07 for National Guard requirement. Intent is to field 16 Battalions and 17 enhanced brigades with ANG.

JUSTIFICATION:

AVENGER constitutes the Line-Of-Sight Rear (LOS-R) component of the Forward Area Air Defense System (FAADS), and it is the first FAADS element fielded.

NOTE: Congress appropriated \$7.2M in FY 98 on the Avenger System which belongs on Avenger Mods. Specifics for this \$7.2M shown on P-forms for CE8710, line number 14.

Exhibit P-5, Weapon Missiles Cost Analysis			Appropriation/ Budget Activity/Serial No: MISSILE PROCUREMENT / 2 / Other Missiles			P-1 Line Item Nomenclature: AVENGER SYSTEM SUMMARY (C14900)			Weapon System Type:			Date: February 1998		
ID	CD	Missiles Cost Elements	FY 96			FY 97			FY 98			FY 99		
			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
		Hardware- Recurring												
		Drive Hardware				35208	93	379				20631	19	1086
		Turrent Assembly Army												
		Unapplied EOQ												
		EOQ Diverted to USMC												
		Command & Launch Hardware												
		Std Veh Mtd Launcher (SMVL) Army				8823	93	165				3639	19	192
		Other GFE-Army Only				4669	93	50				2245		
		Other (HMMWV)										1013	19	53
		SubTotal Hardware				48700						27528		
		Total Driveaway				48700						27528		
		Support Cost												
		Peculiar Support Equipment	2115			3304						2109		
		Training Equipment	14959			319								
		Contractor Engineering	2726			4953								
		Government Engineering	2020			4560						1018		
		Interim Contractor Support	2015									2198		
		Fielding	6261									2416		
		Other (Project Mgt Admin)	436			519								
		SubTotal Support Cost	30532			13655						7741		
		Gross P-1 End Cost	30532			62355						35269		
		Less: Prior Year Adv Proc												
		Net P-1 Full Funding Cost												
		PLUS P-1 CY Adv. Proc.												
		Other Non P-1 Costs				62355						35269		
		Initial Spares												
		MODS	987									8425		
		TOTAL	31519			62355						43694		

Exhibit P-5a, Budget Procurement History and Planning										Date:
Appropriation / Budget Activity/Serial No:		Weapon System Type:		P-1 Line Item Nomenclature:						
MISSILE PROCUREMENT / 2 / Other Missiles				AVENGER (PED MT STINGER) (MYP) (C16000)						
WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
FY 97 FY 99	Boeing Aerospace Huntsville, AL Boeing Aerospace Huntsville, AL	SSM-6/FP SS/FP	MICOM MICOM	Dec-96 Dec-98	May-97 Mar-99	93 20	379 975	yes yes		
REMARKS:										

February 1998

Item No. 2 Page 5 of 6

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
MISSILE PROCUREMENT / 2 / Other Missiles												HELLFIRE SYS SUMMARY (C70000)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty	44990	1600	1102	2856	1100	2000	2200	2200	2200	1797		62045	
Gross Cost	1832.0	127.5	235.9	356.4	242.3	360.6	301.9	294.1	230.1	190.3	50.0	4221.1	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	1832.0	127.5	235.9	356.4	242.3	360.6	301.9	294.1	230.1	190.3	50.0	4221.1	
Initial Spares	7.5											7.5	
Total Proc Cost	1839.5	127.5	235.9	356.4	242.3	360.6	301.9	294.1	230.1	190.3	50.0	4228.6	
Flyaway U/C	0.040	0.080	0.214	0.125	0.219	0.179	0.135	0.132	0.103	0.104		0.068	
Wpn Sys Proc U/C	0.040	0.080	0.214	0.125	0.220	0.181	0.137	0.134	0.105	0.106		0.068	

Description: HELFIRE is an air-to-ground missile system designed to defeat individual targets and minimize exposure of the delivery vehicle to enemy fire. Laser HELFIRE uses semi-active laser terminal guidance; Longbow HELFIRE uses a radio frequency guidance section and is a fire-and-forget missile. HELFIRE is the primary anti-tank armament of the AH-64 Apache, OH-58D Kiowa Warrior, and Special Operations helicopters and will be used by the RAH-66 Comanche, the Army's next generation helicopter. Production buys are scheduled to support training, testing, fielding, and deployment of these aircraft. Beginning in FY 90, the missile was reconfigured with an interim warhead to improve lethality against near term threat reactive armor. Development of the HELFIRE II was completed in 3rd Qtr, FY 93. The first full production contract was awarded on 26 May 93. Longbow HELFIRE began production in FY 95 with Long Lead Items and Initial Production Facilitation.

The Army requests congressional approval for a multi-year procurement contract, to be awarded in November 1998. The multi-year contract will procure 10,397 Longbow Hellfire missiles during the five year period, FY99-03.

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
MISSILE PROCUREMENT / 2 / Other Missiles												P-1 Item Nomenclature:
Program Elements for Code B Items:												LASER HELLFIRE MSL (BASIC/HWH/FII) (C70100)
Other Related Program Elements:												
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty	4490	1600	750	1800								49140
Gross Cost	1802.8	86.3	50.7	107.1	9.5	14.3	2.2					2072.9
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	1802.8	86.3	50.7	107.1	9.5	14.3	2.2					2072.9
Initial Spares	5.7											5.7
Total Proc Cost	1808.5	86.3	50.7	107.1	9.5	14.3	2.2					2078.6
Flyaway U/C	0.040	0.054	0.068	0.060								0.042
Wpn Sys Proc U/C	0.040	0.054	0.068	0.060								0.042

Description: HELLFIRE is an air-to-ground missile system designed to defeat individual targets and minimize exposure of the delivery vehicle to enemy fire. Laser HELLFIRE uses semi-active laser terminal guidance and is the primary anti-tank armament of the AH-64 Apache, OH-58D Kiowa Warrior, and Special Operations helicopters and will be used by the RAH-66 Comanche, the Army's next generation Helicopter. Beginning in FY 90, the missile was reconfigured with an interim warhead to improve lethality against near term threat reactive armor. Development of HELLFIRE II was completed in 3rd Qtr, FY 93. The first full production contract was awarded on 26 May 93. HELLFIRE II includes hardening of the laser seeker against countermeasures, further warhead improvements for the long term, replacement of the mechanical fuse with an electronic fuse, and restoration of the original length and weight.

Justification: HELLFIRE II will defeat all known electro-optical countermeasures and advanced reactive armors. Using its semi-active laser homing guidance system, laser HELLFIRE is perfectly suited for precision strikes at a variety of individual hardpoint targets, while minimizing exposure of the aircraft and supporting troops.

Exhibit P-5, Weapon Missiles Cost Analysis			Appropriation/ Budget Activity/Serial No: MISSILE PROCUREMENT / 2 / Other Missiles			P-1 Line Item Nomenclature: LASER HELLFIRE MSL (BASIC/HWH/HFI) (C70100)			Weapon System Type:			Date: February 1998		
ID	CD	Missiles Cost Elements	FY 96			FY 97			FY 98			FY 99		
			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
Flyaway Costs														
		Hardware Costs - Recurring												
		All-Up-Rounds												
		Containers	34133	750	46	83404	1800	46						
		Gov Furn Eq (GFE) Explosives	4212	3454	1									
		Engineering Services	441			1173			1200			2742		
		Engineering Change Orders	1784			2134								
		Fielding	782			1472								
		Acceptance Testing	128			161			239			311		
		SUBTOTAL	2350			4058			2250			3664		
			43830			92402			3689			6717		
Engineering Support														
		Project Mgt Admin	2895			5069			3198			2956		
		Production Engineering Support	4015			6661			2659			4658		
		SUBTOTAL	6910			11730			5857			7614		
NON-Recurring														
		Depot Tooling/Test Equipment												
		Initial Production Facilitization (IPF)				2981								
		Rate Tooling/ Test Equipment				2981								
		SUBTOTAL												
		TOTAL FLYAWAY	50740			107113			9546			14331		
Peculiar Support Equipment														
		Environmental Protection Covers												
		SUBTOTAL												
Launchers														
		Gross P-1 End Cost	50740			107113			9546			14331		
		Less: Prior Year Adv Proc												
		Net P-1 Full Funding Cost	50740			107113			9546			14331		
		Plus: P-1 CY Adv Proc												
		Other Non P-1 Costs												
		Initial Spares												
		Mods												
		TOTAL	50740			107113			9546			14331		

Exhibit P-5a, Budget Procurement History and Planning										Date:	
P-1 Line Item Nomenclature:										February 1998	
Weapon System Type:											
Laser Hellfire MSL (BASIC/HWH/FII) (C70100)											
Appropriation / Budget Activity/Serial No:	WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
FY 96		HELLFIRE Systems Limited Liability Company (HSLLC) Orlando, FI	FFP	AMCOM	Jan-96	Nov-98	750	46	Yes		
FY 97		HELLFIRE Systems Limited Liability Company (HSLLC) Orlando, FI	FFP	AMCOM	Jan-97	May-99	1800	46	Yes		
REMARKS:											

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
MISSILE PROCUREMENT / 2 / Other Missiles												LONGBOW/HELLFIRE (C70300)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty			352	1056	1100	2000	2200	2200	2200	1797		12905	
Gross Cost		41.2	185.2	249.3	232.7	302.0	313.0	306.2	240.2	199.1	50.0	2118.9	
Less PY Adv Proc							13.3	12.1	10.1	8.8		44.3	
Plus CY Adv Proc						44.3						44.3	
Net Proc (P-1)		41.2	185.2	249.3	232.7	346.3	299.7	294.1	230.1	190.3	50.0	2118.9	
Initial Spares													
Total Proc Cost		41.2	185.2	249.3	232.7	346.3	299.7	294.1	230.1	190.3	50.0	2118.9	
Flyaway U/C			0.526	0.236	0.210	0.171	0.134	0.132	0.103	0.104		0.163	
Wpn Sys Proc U/C			.526	.236	.211	.173	.136	.134	.105	.106		.164	

Description: Longbow HELLFIRE is the air-to-ground missile system component of the Longbow system. It is designed to defeat individual targets and substantially enhance survivability of the AH-64D Longbow Apache Helicopter. Longbow HELLFIRE uses a radio frequency guidance section. Further, the Longbow HELLFIRE missile provides a lock-on-before-launch (LOBL) or lock-on-after-launch (LOAL) capability depending on target range and movement parameters. Longbow does not change the AH-64 mission or role, but provides for increased mission effectiveness by enhancing lethality and survivability. The production buys support training, fielding and deployment of the AH-64D Longbow Helicopter. All three Longbow program elements (Fire Control Radar, D Model Apache Helicopter and Longbow HELLFIRE Missile) were developed simultaneously and are scheduled to be fielded as a total system. Long Lead Items procured in FY 95 provided for the procurement of materials for the first Low Rate Initial Production year (FY 96). This was required to meet system fielding requirements. Laser HELLFIRE and Longbow HELLFIRE are complementary. Both are required on the modern battlefield.

Justification: The Longbow HELLFIRE will provide the capability to conduct battle both day and night in adverse weather and with battlefield obscuration present. With its radio frequency guidance section, the Longbow HELLFIRE complements the semi-active Laser HELLFIRE II with a true fire and forget capability, maximizing the ability of the Longbow Apache helicopter to operate in adverse weather, and dramatically increases the aircraft's survivability.

The Army requests congressional approval for a multi-year procurement contract to be awarded in November 1998. The multi-year contract will procure 10,397 Longbow HELLFIRE missiles during the five year period, FY99-03. Advance Procurement of \$44.3M in FY99 required for Economic Order Quantity (EOQ) materials. The multi-year contract will result in a cost avoidance of \$172.2M over annual procurement. The exhibits have been corrected to show the split between FY99 procurement costs and Advance Procurement. Request the multi-year be approved, authorized, and appropriated using the funding split shown.

Exhibit P-5, Weapon Missiles Cost Analysis			Appropriation/ Budget Activity/Serial No. MISSILE PROCUREMENT / 2 / Other Missiles				P-1 Line Item Nomenclature: LONGBOW HELLFIRE (C70300)				Weapon System Type:		Date: February 1998	
Missiles Cost Elements			FY 96		FY 97		FY 98		FY 99					
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
Flyaway Costs														
		Hardware Costs - Recurring												
		All-Up-Rounds	133194	352	378	210630	1056	199	198100	1100	180	270979	2000	135
		Containers							1167	1100	1	2211	2000	1
		Gov Furn Eq (GFE) Explosives	148			609			627			1295		
		Engineering Services	4330			4194			2953			5301		
		Engineering Change Orders	2557			2681			2247			2720		
		Fielding				776			1100			4856		
		Acceptance Testing	2369			2669			2250			3640		
		SUBTOTAL	142598			221559			208444			291002		
Engineering Support														
		Project Mgt Admin	3415			3872			3663			3664		
		Production Engineering Support	6094			5455			4398			3772		
		SUBTOTAL	9509			9327			8061			7436		
Non-Recurring														
		Disposal of Tooling/ Test Equipment												
		Initial Production Facilitization (IPF)	12309											
		Cost Reduction Program	20798			2319			14900					
		Rate Tooling/Test Equipment	33107			16081			14900					
		SUBTOTAL	33107			18400			14900					
		TOTAL	185214			249286			231405			298438		
Peculiar Support Equipment														
		Environmental Protection Covers												
		SUBTOTAL												
		Gross P-1 End Cost	185214			249286			232725			301994		
		Less: Prior Year Adv Proc							1320			3556		
		Net P-1 Full Funding Cost	185214			249286			232725			301994		
		Plus: P-1 CY Adv Proc										44300		
		Other Non P-1 Costs												
		Initial Spares												
		Mods												
		TOTAL	185214			249286			232725			346294		

Exhibit P-5a, Budget Procurement History and Planning										
Appropriation / Budget Activity/Serial No:			Weapon System Type:		P-1 Line Item Nomenclature:					Date: February 1998
MISSILE PROCUREMENT / 2 / Other Missiles					LONGBOW HELLFIRE (C70300)					
WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
FY 96	Longbow Limited Liability Company (LLLC) Orlando, FI	FFP	AMCOM	Jan-96	May-97	352	378	Yes		*
FY 97	Longbow Limited Liability Company (LLLC) Orlando, FI	FFP	AMCOM	Jan-97	Jul-98	1056	199	Yes		**
FY 98	Longbow Limited Liability Company (LLLC) Orlando, FI	FFP	AMCOM	Dec-97	Sep-99	1100	180	Yes		**
FY 99	Longbow Limited Liability Company (LLLC) Orlando, FI	***FFP	AMCOM	Dec-98	Sep-00	2000	158	Yes		**
REMARKS: *System and development specifications are under government control, but the technical data package is not. **In the Longbow HELLFIRE's transition to production, performance based specifications will be used in all production contracts. ***Planned five year multiyear contract.										

February 1998

LONGBOW HELLFIRE (C70300)

February 1998

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

[illegible]

[illegible]

31	21	
TOTAL	er 1 Oct.	

	Before	After		
0	1	2	3	4

MFR	28
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MAX.	234
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ON RATES	8-5	*
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PRODUCTION	1-		
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MIN.	100
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5

LOCATION
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NAME / Liability Com

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o, Fl

M	F	R	3	Longb	Orland
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Advance Procurement Requirements Analysis-Funding (P-10A)														
Appropriation / Budget Activity/Serial No.				First System Award Date: Dec '98				First System Completion Date: Sept '00				Date: February 1998		
MISSILE PROCUREMENT / 2 / Other Missiles				P-1 Line Item Nomenclature / Weapon System: LONGBOW HELLFIRE (C70300)										
(\$ in Millions)														
	PLT (mos)	When Rqd (mos)	Pr Yrs	1995	1996	1997	1998	1999	2000	2001	2002	2003	To Comp	Total
End Item Quantity: Economic Order Quantity for Longbow Hellfire missile	13	18		41.2	185.2	249.3	232.7	346.3	299.7	294.1	230.1	190.3	50.0	2118.9
Total Advance Procurement				41.2	185.2	249.3	232.7	346.3	299.7	294.1	230.1	190.3	50.0	2118.9
Description: Advance Procurement requirement is the Economic Order Quantity (EOQ) materials required for the FY99-03 multi-year procurement. Cost for EOQ in FY99 is \$44.275M. Possible EOQ materials: Bulk metals for housing, selected electronic components, bulk materials for antenna, radome, and gimbal transceiver.														

Advance Procurement Requirements Analysis-Budget Justification (P-10B)									
Appropriation / Budget Activity/Serial No:				P-1 Line Item Nomenclature / Weapon System:			Date:		
MISSILE PROCUREMENT / 2 / Other Missiles				LONGBOW HELLFIRE (C70300)			February 1998		
(\$ in Millions)									
End Item	PLT (mos)	Quantity Per Assembly	Unit Cost	1998			1999		
				Qty	Contract Forecast Date	Total Cost Request	Qty	Contract Forecast Date	Total Cost Request
Economic Order Quantity for Longbow Hellfire missile includes	19	1	0.00527				8397	Dec 98	44.3
Total Advance Procurement									44.3
Description: Advance Procurement requirement is the Economic Order Quantity (EOQ) materials required for the FY99-03 multi-year procurement. The contractor will select materials that yield the greatest savings.									

Exhibit P-40, Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No:										Date: February 1998		
MISSILE PROCUREMENT / 2 / Other Missiles										JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)		
P-1 Item Nomenclature:												
Program Elements for Code B Items:										Other Related Program Elements:		
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty	703	872	1010	1020	894	3316	5458	5403	7038			25714
Gross Cost	224.5	210.0	200.9	160.0	148.2	345.6	454.2	397.7	460.4	73.0	80.7	2755.2
Less PY Adv Proc	18.3				9.1	25.6						53.0
Plus CY Adv Proc	18.3			34.7								53.0
Net Proc (P-1)	224.5	210.0	200.9	194.8	139.1	320.0	454.2	397.7	460.4	73.0	80.7	2755.2
Initial Spares						4.7	4.7	6.7	7.9	8.1	16.0	48.1
Total Proc Cost	224.5	210.0	200.9	194.8	139.1	324.7	458.9	404.4	468.3	81.1	96.7	2803.3
Flyaway U/C	315.4	229.0	188.6	140.7	136.6	99.8	77.3	68.8	63.2			
Wpn Sys Proc U/C	320.1	243.8	198.9	156.9	140.9	106.2	85.4	75.8	67.6			

DESCRIPTION: This project provides procurement funds for JAVELIN, the medium antitank system for infantry, scouts and combat engineers. These forces must have the capability to defeat numerically superior armored forces. The JAVELIN, a replacement for the DRAGON, is a medium range, manportable antitank system for use in all forms of maneuver operations. It can be delivered by individual paratrooper, door bundle, tracked/wheeled vehicles, rail, ship and air. This system has a high kill rate against all known armor threats at extended ranges under day/night, adverse weather and battlefield obscurant conditions. The system's soft launch permits firing from a fighting position or from an enclosure. JAVELIN is hardened against countermeasures and does not require extensive training for effective employment. The Command Launch Unit (CLU) is reusable and consists of a target acquisition device, Built-in-Test (BIT), a trigger mechanism, and appropriate interfaces. The round includes a missile encased in a disposable launch tube assembly. Attached to the launch tube are CLU mating connector, front and rear shock attenuators, removable front end cap, as well as a replaceable battery coolant unit (BCU), an adjustable replaceable shoulder strap, and a replaceable desiccant.

JUSTIFICATION: The operational concept envisioned for fighting the antiarmor battle requires an effective, extended range, manportable, fire-and-forget, weapon for dismounted combat forces. JAVELIN's fire-and-forget technology allows the gunner to fire and immediately take cover, move to another fighting position, or reload. The JAVELIN provides enhanced lethality over the DRAGON through the use of a tandem warhead which will defeat all known armor threats. It is effective against stationary and moving targets. The JAVELIN is capable of operating at 2.5 times the range (2500m) of the DRAGON with a day/night integrated sight, capable of target acquisition in adverse weather and through battlefield obscurant conditions. This system will have a secondary mission of destroying bunkers and will provide defensive capability against hovering helicopters. The CLU can be used in a stand-alone mode for battlefield surveillance and target selection. There were 3605 rounds procured through FY1997. Another 894 are scheduled for procurement in FY1998 under the second year award of a three-year multiyear contract, and 3316 in FY1999, the final year of the multiyear contract. 17,899 are planned for purchase in subsequent years, with a second three-year multiyear contract FY00-02. Quantities have changed since the FY1998 submission because 186 All Up Rounds (AUR) were reduced from the Army quantity and the USMC will procure them.

Exhibit P-5, Weapon Missiles Cost Analysis			Appropriation/ Budget Activity/Serial No: MISSILE PROCUREMENT / 2 / Other Missiles		P-1 Line Item Nomenclature: JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)		Weapon System Type:		Date: February 1998	
ID	CD	Missiles Cost Elements	FY 96		FY 97		FY 98		FY 99	
			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each
		Missile Hardware- Recurring								
		All Up Round	123220	1010	122	80232	1020	79	260558	3316
		Engineering Services	14298			12193			2134	
		Engineering Change Orders	2878			2309			5940	
		Acceptance Testing	5450			4140			3434	
		Fielding	1532			1000			1051	
		SubTotal Missile Hardware	147378			99874			273217	
		Procurement Support								
		Government Project Management	5391			5643			6280	
		Government Production Engineering	3652			3902			3277	
		Publications/Technical Data	577			407			416	
		SUBTOTAL	9620			9952			9973	
		Total Flyaway	156998			109826			283190	
		Command & Launch Hardware								
		Command Launch Unit	25056	108	232	26065	206	127	41425	325
		Engineering Services	3005			3553			452	
		Engineering Change Orders	818			665			498	
		Fielding	4588			3751			948	
		SubTotal C&L Hardware	33467			34034			43323	
		Training Devices								
		Field Tactical Trainer - Student Station	7062	54	131	13490	129	105	15178	144
		Field Tactical Trainer -Instructor Station	943	23	41	318	13	24	808	33
		Basic Skills Trainer	2136	16	134	1950	15	130	2479	19
		Missile Simulation Round	252	126	2	425	174	2	623	333
		SubTotal Training Devices	10393			16183			19088	
		Gross P-1 End Cost	200858			160043			345601	
		Less: Prior Year Adv Proc							25613	
		Net P-1 Full Funding Cost	200858			160043			319988	
		Plus: P-1 CY Adv Proc				34717				
		Other Non P-1 Costs								
		Initial Spares							4703	
		Mods								
		TOTAL	200858			194760			324691	

Exhibit P-5a, Budget Procurement History and Planning																					
Appropriation / Budget Activity/Serial No:				Weapon System Type:			P-1 Line Item Nomenclature:														
MISSILE PROCUREMENT / 2 / Other Missiles							JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)														
WBS Cost Elements:		Contractor and Location		Contract Method and Type		Location of PCO		Award Date		Date of First Delivery		QTY Each		Unit Cost \$000		Specs Avail Now?		Date Revis Avail		RFP Issue Date	
Fiscal Years																					
All Up Round		Joint Venture TI/MM*		SS/FP		AMCOM		Feb-96		Mar-98		1010		122							
FY 96		Joint Venture TI/MM*		SS/FP**		AMCOM		May-97		Oct-99		1020		79							
FY 97		Joint Venture TI/MM*		SS/FP**		AMCOM		Dec-97		Oct-00		894		79		Yes					
FY 98		Joint Venture TI/MM*		SS/FP**		AMCOM		Dec-98		Oct-01		3316		79		Yes					
FY 99																					
Command Launch Unit		Joint Venture TI/MM*		SS/FP		AMCOM		Feb-96		Oct-98		108		232							
FY 96		Joint Venture TI/MM*		SS/FP**		AMCOM		May-97		Oct-99		206		127							
FY 97		Joint Venture TI/MM*		SS/FP**		AMCOM		Dec-97		Oct-00		368		127		Yes					
FY 98		Joint Venture TI/MM*		SS/FP**		AMCOM		Dec-98		Oct-01		325		127		Yes					
FY 99																					
REMARKS:																					
*Lewisville, TX; Orlando, FL																					
**Multiyear contract																					

[illegible]

FY 98 / 99 BUDGET PRODUCTION SCHEDULE										P-1 Item Nomenclature: JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)										Date: February 1998																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
MISSILE PROCUREMENT / 2 / Other Missiles												JAVELIN (AAWS-M) (ADV PROC) (CC0007)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost												0.0	
Less PY Adv Proc	18.3				9.1	25.6						53.0	
Plus CY Adv Proc	18.3			34.7								53.0	
Net Proc (P-1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Initial Spares													
Total Proc Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Flyaway U/C													
Wpn Sys Proc U/C													

DESCRIPTION: These advance procurement funds will provide economic order quantities for year two and year three of the Javelin three-year multiyear procurement. Javelin is a medium antitank system for infantry, scouts, and combat engineers. These forces must have the capability to defeat numerically superior armored forces. The Javelin, a replacement for the Dragon, is a medium range, manportable antitank system for use in all forms of maneuver operations. It can be delivered by individual paratrooper, door bundle, tracked/wheeled vehicles, rail, ship and air. This system has a high kill rate against all known armor threats at extended ranges under day/night, adverse weather and battlefield obscurant conditions. The system's soft launch permits firing from a fighting position or from an enclosure. The Javelin is hardened against countermeasures and does not require extensive training for effective employment.

Advance Procurement will buy parts and materials in support of the All Up Round, Command Launch Unit (CLU), the Basic Skills Trainer, Field Tactical Trainer (FTT)-Instructor Station, and the FTT-Student Station. The leadtime for these items is 12-18 months.

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No.		P-1 Item Nomenclature:										TOW 2 SYSTEM SUMMARY (C59300)	
MISSILE PROCUREMENT / 2 / Other Missiles		Other Related Program Elements:											
Program Elements for Code B Items:		Code:											
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty	143242	1541										144783	
Gross Cost	2219.5	36.7	9.1	9.4	1.2						0.0	2275.9	
Less PY Adv Proc	16.1											16.1	
Plus CY Adv Proc	16.1											16.1	
Net Proc (P-1)	2219.5	36.7	9.1	9.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0	2275.9	
Initial Spares	20.2											20.2	
Total Proc Cost	2239.7	36.7	9.1	9.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0	2296.1	
Flyaway U/C	33.9	23.7											
Wpn Sys Proc U/C	0.016	0.023											
<p>DESCRIPTION: TOW (Tube-Launched, Optically-Tracked, Wire-Guided Missile System) is designed to fulfill, the Heavy Antitank Assault Weapon System requirement for Close Combat Maneuver Forces. TOW is used primarily to destroy formations of armored vehicles, but is also an effective assault weapon against vehicles, field fortifications, and emplacements. TOW was a part of a combined United Nations interagency force in Somalia and may be used against other regional threats. TOW can be fired from a ground tripod or from specifically adapted vehicles, e.g., ITV, Bradley, HMMWV, and Cobra. TOW is designated as the point target weapon on selected helicopters. TOW 2 has two distinct improvements, increase performance/hardening and a 6" full caliber warhead. TOW 2A added a small shaped tip of the TOW 2 probe to counter reactive armor, TOW 2B is an improvement to TOW 2 lethality based on a new warhead, fuze, and software to obtain a fly-over-shoot-down-missile.</p> <p>JUSTIFICATION: FY 98 funds completes plant transition/closure and final disposition of excess equipment.</p>													

Exhibit P-5, Weapon Missiles Cost Analysis		Appropriation/ Budget Activity/Serial No: MISSILE PROCUREMENT / 2 / Other Missiles				P-1 Line Item Nomenclature: TOW 2 SYSTEM SUMMARY (C59300)				Weapon System Type:		Date: February 1998	
Missiles Cost Elements	ID	FY 96			FY 97			FY 98			FY 99		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
Missile Hardware-Recurring	CD	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
Missile Contract													
GFE													
Engineering Change Orders (Value Engineering)													
SUBTOTAL MISSILE HARDWARE													
Non-Recurring Costs		5000			4600								
Capstan Block		1004			1113			893					
Plant Transition/Closure/Final Disposition of excess equipment.		6004			5713			893					
SUBTOTAL NONRECURRING COST													
PROCUREMENT SUPPORT-													
Contractor Engineering		2063			1929			150					
Production Engineering		680			101			147					
Government Test		240			1567								
Project Management Admin													
Fielding													
SUBTOTAL		2983			3597			297					
Total Flyaway		8987			9310			1190					
Support Cost													
Peculiar Support Equipment													
Launcher (N/S)													
Training Device (B/S)													
DMPE													
Engineering Change Orders		108			75								
Other (Specify) FDT													
SUBTOTAL SUPPORT COST		108			75								
Gross P-1 End Cost		9095			9385			1190					
Less: Prior Year adv Proc													
Net P-1 Full Funding Cost		9095			9385			1190					
Plus P-1 CY Adv Proc.													
Other non P-1 Costs													
Initial Spares		41319			2311			5410			6595		
MODS					16			61061			62478		
TOTAL		50414			11712			67661			69073		

Exhibit P-5a, Budget Procurement History and Planning										Date:
Appropriation / Budget Activity/Serial No:		Weapon System Type:			P-1 Line Item Nomenclature:					February 1998
MISSILE PROCUREMENT / 2 / Other Missiles					TOW 2 SYSTEM SUMMARY (C59300)					
WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
FY 1996	Hughes Aircraft Tucson, AZ	SS/FFP	AMCOM	Aug-96	N/A	N/A	N/A	N/A	N/A	N/A
FY 1997 Final Disposition of Excess Equipment	Hughes Aircraft Tucson, AZ	TBD*	AMCOM	TBD	N/A	N/A	N/A	N/A	N/A	N/A
FY 1998 Final Disposition of Excess Equipment	Hughes Aircraft Tucson, AZ	TBD	AMCOM	TBD	N/A	N/A	N/A	N/A	N/A	N/A
REMARKS: *Plans not finalized for plant closure and material disposition.										

P-1 Item Nomenclature:

[illegible]

February 1998

[illegible]

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No.												February 1998
P-1 Item Nomenclature:												MLRS ROCKET (C65400)
MISSILE PROCUREMENT / 2 / Other Missiles												
Program Elements for Code B Items:												
Code:												Other Related Program Elements:
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty	478398		1326	1500	528	426	432	390	300	1200		484500
Gross Cost	3533.9	35.4	44.6	45.3	19.3	16.5	17.3	18.4	24.5	59.7	0.0	3815.0
Less PY Adv Proc	429.4											429.4
Plus CY Adv Proc	449.8											449.8
Net Proc (P-1)	3554.2	35.4	44.6	45.3	19.3	16.5	17.3	18.4	24.5	59.7	0.0	3835.3
Initial Spares												
Total Proc Cost	3554.2	35.4	44.6	45.3	19.3	16.5	17.3	18.4	24.5	59.7	0.0	3835.3
Flyaway U/C	0.007		0.033	0.030	0.035	0.037	0.039	0.045	0.079	0.049		
Wpn Sys Proc U/C	0.007		0.034	0.030	0.037	0.039	0.040	0.047	0.082	0.050		

DESCRIPTION: The Extended Range Multiple Launch Rocket System (ER-MLRS), which began production in FY96, includes a tube-launched, spin stabilized, free flight rocket. Major assemblies of the rocket are a fuze warhead, a rocket motor, four fins, a fin opening/restraint device, and four sabots. The rocket is packaged in a six rocket pod and can be fired one at a time or in ripples of two to six. The ER-MLRS rocket will enhance the capability of the existing MLRS rocket by providing improvements in range, accuracy and effectiveness, and maneuver force safety (improved submunitions with self destruct fuzes). Starting in FY 02, the Guided Multiple Launch Rocket System (GMLRS) will integrate a guidance and control package into the ER-MLRS rocket which will result in reduced mission time and increased survivability of the system.

JUSTIFICATION: The objective system provides counterfire and suppression of enemy air defenses, light materiel, and personnel targets. The increased range gives positioning flexibility and improves lateral ranging of targets on tomorrow's wider battlefronts. Operation Desert Storm identified the need for increased range to defeat long range targets. ER-MLRS will accomplish this mission. The GMLRS will provide greater range and significantly enhanced accuracy. Since fewer rockets will be required to defeat a target, the logistics burden will be reduced.

* Quantities were corrected after the P-1 database locked because of recent revisions to Submunition Costs, and projected FMS cases did not materialize.

Exhibit P-5, Weapon Missiles Cost Analysis			Appropriation/ Budget Activity/Serial No: MISSILE PROCUREMENT / 2 / Other Missiles			P-1 Line Item Nomenclature: MLRS EXTENDED RANGE ROCKET (C65402)			Weapon System Type:			Date: February 1998		
Missiles Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$	\$000	Each	\$	\$000	Each	\$	\$000	Each	\$
FLY-AWAY COSTS														
HARDWARE														
		Tactical/Practice Round (Less GFE)												
		Submunition	22451	1326	16931	32300	1500	21533	12232	528	23167	10136	426	23793
		Engineering Services	12067	686868	18	9012	777000	12	3282	273504	12	2869	220688	13
		Engineering Change Orders	8561			2767			1502			1533		
		Fielding				11			205			258		
									230			132		
		SUBTOTAL	43079			44090			17451			14928		
PROCUREMENT SUPPORT														
		Project Management Admin	450			620			1036			1051		
		Test & Evaluation	973			500			730			422		
		Service Support Contract	105			108			110			112		
		SUBTOTAL	1528			1228			1876			1585		
Gross P-1 End Cost														
Less: Prior Year Adv Proc														
Net P-1 Full Funding Cost														
Plus: P-1 CY Adv Proc														
Other Non P-1 Costs														
Initial Spares														
Mods														
		TOTAL	44607			45318			19327			16513		
			44607			45318			19327			16513		
			44607			45318			19327			16513		

Exhibit P-5a, Budget Procurement History and Planning										Date: February 1998
Appropriation / Budget Activity/Serial No:		Weapon System Type:		P-1 Line Item Nomenclature:						
MISSILE PROCUREMENT / 2 / Other Missiles				MLRS EXTENDED RANGE ROCKET (C65402)						
WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$	Specs Avail Now?	Date Revis Avail	RFP Issue Date
Fiscal Years										
Tactical/Practice Round (Less GFE)										
FY 96	Lockheed Martin Vought Sys., Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Aug-96	Jan-98	1326	16931	Yes		
FY 97	Lockheed Martin Vought Sys., Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Feb-97	May-98	1500	21533	Yes		
FY 98	Lockheed Martin Vought Sys., Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Jul-98	Dec-99	528	23167	Yes		
FY 99	Lockheed Martin Vought Sys., Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Dec-98	May-00	426	23793	Yes		
REMARKS: No Tactical Rockets procured in FY 95.										

Exhibit P-40, Budget Item Justification Sheet													Date:	February 1998
Appropriation / Budget Activity / Serial No:													P-1 Item Nomenclature:	
MISSILE PROCUREMENT / 2 / Other Missiles													MLRS LAUNCHER (C65900)	
Program Elements for Code B Items:													Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog		
Proc Qty	734	20			35	24	54	71	90	140	442	1610		
Gross Cost	1763.6	130.5	81.1	103.6	118.7	85.4	142.9	175.7	198.7	279.3	1074.1	4153.6		
Less PY Adv Proc	54.5							15.7	22.4	33.1	88.9	194.6		
Plus CY Adv Proc	56.9						15.7	46.4	40.9		37.1	197.0		
Net Proc (P-1)	1766.0	130.5	81.1	103.6	118.7	85.4	158.6	206.4	217.3	246.2	1042.3	4156.0		
Initial Spares	141.8	12.0	5.1		1.0	6.9	6.1	10.5	12.6	12.4		208.4		
Total Proc Cost	1907.8	142.5	86.2	103.6	119.7	92.2	164.7	216.8	229.9	258.6	1042.3	4364.3		
Flyaway U/C	2.2	5.8	2.1	2.3	3.6	3.6	2.7	2.5	2.3	2.1	2.4			
Wpn Sys Proc U/C	2.4	6.5	2.8	3.0	3.4	3.6	2.9	2.9	2.4	1.8	2.4			

DESCRIPTION: The Multiple Launch Rocket System (MLRS) provides a high volume of fire power in a very short timeframe. Operationally, the concept is designed for the mobility, flexibility, and range requirements of the modern battlefield. Mounted on a derivative of the Bradley Fighting Vehicle (BFV), the 12-round launcher/loader requires a crew of three personnel to conduct launching missions. The range, using the Extended Range rocket, is 45 kilometers. Starting in FY 98 an Improved Fire Control System (IFCS) and an Improved Launcher Mechanical System (ILMS) will be procured and become part of the M270A1 upgrade. The IFCS is a modification to the current Fire Control System which provides the interface with the Fire Direction Center, the Munitions Controls and the MLRS Launcher. The IFCS will upgrade the system's electronics providing increased processing capability, an embedded global positioning system for future munitions and improved fault isolation for ease of launcher maintenance. The ILMS will allow faster target engagement on time sensitive, short dwell time targets and greatly reduces time on the firing point and reload operations in order to improve the survivability of the crew and the launcher. FY 96 and FY 97 funds provide for remanufactured launchers. FY 98 and out quantities are for M270A1 upgrades. The M270A1 upgrades are needed to fire the Block 1A ATACMS missile. FY 98-03 funding also includes five batteries of rebuilt launchers for deployment to MLRS Heavy Divisions. FY99 funds buy 24 M270A1 launchers.

JUSTIFICATION: The objectives of the system are counterfire and suppression of enemy air defenses, light materiel, and personnel targets. The system is designed for adaptation to other warheads such as scatterable mines, terminally guided munitions, and other smart munitions. MLRS is the Army's rocket launch platform for the next decade. The IFCS provides faster response times for high priority targets, enhances survivability, supports attack operations, mitigates electronic hardware obsolescence and reduces operating and support costs. The ILMS decreases stow to aim point timeline, enhances effectiveness in engaging and supporting the force, and increases MLRS platform survivability.

Exhibit P-5, Weapon Missiles Cost Analysis			Appropriation/ Budget Activity/Serial No: MISSILE PROCUREMENT / 2 / Other Missiles			P-1 Line Item Nomenclature: MLRS LAUNCHER (C65900)			Weapon System Type:			Date: February 1998			
Missiles Cost Elements			ID	FY 96			FY 97			FY 98			FY 99		
			CD	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
				\$000	Each	\$	\$000	Each	\$	\$000	Each	\$	\$000	Each	\$
GROUND EQUIPMENT HARDWARE															
Launcher*				12185	29	420172									
Carrier (GFE)				3609	29	124448	13780	35	393714	63977	35	1827914	47053	24	1960542
Launcher Pod/Container (LP/C) Trainer				1132	58	19517	7348	35	209943				4160	24	173333
2x9 Launcher							1405	70	20071	766	70	10943	526	48	10958
Peculiar Support Equipment				20196			9917			21772					
Engineering Services				26791			17762			11906			20885		
Engineering Change Orders				77			38720			10857			516		
Fielding				8014			6400			500			3245		
SUBTOTAL				72004			95332			109778			76385		
PROCUREMENT SUPPORT															
Project Management Admin				8200			7341						7474		
Service Support Contract				889			892			1514			1528		
SUBTOTAL				9089			8233			8932			9002		
Gross P-1 End Cost				81093			103565			118710			85387		
Less: Prior Year Adv Proc															
Net P-1 Full Funding Cost				81093			103565			118710			85387		
Plus: P-1 CY Adv Proc															
Other Non P-1 Costs (Mod Spares)				2051			1829			991			622		
Initial Spares				5077						998			6862		
Mods				27475			6397			2129			2193		
TOTAL				115696			111791			122828			95064		
* Launchers in FY96 and FY97 are remanufactured hardware.															

Exhibit P-5a, Budget Procurement History and Planning										Date:
P-1 Line Item Nomenclature:										February 1998
Weapon System Type:										MLRS LAUNCHER (C65900)
Appropriation / Budget Activity / Serial No:										
MISSILE PROCUREMENT / 2 / Other Missiles										
WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$	Specs Avail Now?	Date Revis Avail	RFP Issue Date
Launcher M270 FY 95	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Mar-95	Nov-96	20	1826400	Yes		
Launcher Remanufacture FY 96	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Aug-96	May-97	29	420172	Yes		
FY 97	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Nov-96	Nov-97	35	393714	Yes		
Launcher M270A1 FY 98	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Mar-98	Apr-00	35	1827914	Yes		
FY 99	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Jan-99	Apr-01	24	1960542	Yes		
REMARKS: First deliveries of FY 96 remanufacture launchers by Red River Army Depot (RRAD) Oct 96; contract with Lockheed Martin Vought System delivers 20 launchers starting May 97.										

FY 98 / 99 BUDGET PRODUCTION SCHEDULE										P-1 Item Nomenclature: MLRS LAUNCHER (C65900)										Date: February 1998															
MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 04												Fiscal Year 05																	
						Calendar Year 04						Calendar Year 05						Calendar Year 04						Calendar Year 05											
						O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S						
						T	V	C	A	E	B	R	R	A	P	R	Y	N	L	G	P	T	O	C	O	V	E	C	N						
COST ELEMENTS																																			
1	95 & Pr	A	772	772																															
1	95 & Pr	NG	85	85																															
1	95 & Pr	FMS	108	108																															
1	FY 96	FMS	20	20																															
1	FY 97	FMS	29	29																															
1	FY 98	FMS	18	18																															
2	FY 96	A	29	29																															
2	FY 97	A	35	35																															
3	FY 98	A	35	35																															
3	FY 99	A	24	24																															
3	FY 00	A	54	54																															
3	FY 01	A	71	33	38	6	6	6	6	7	7																								
3	FY 02	A	90	0	90																														
3	FY 03	A	140	0	140																														
TOTAL						6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7						
						6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7						
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						6	6																												

Exhibit P-40, Budget Item Justification Sheet													Date: February 1998
Appropriation / Budget Activity/Serial No:			P-1 Item Nomenclature:										ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)
MISSILE PROCUREMENT / 2 / Other Missiles			Other Related Program Elements:										
Program Elements for Code B Items:			Code:	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Proc Qty	1449	148	120	97	100	96	100	110	89.9	15.0	7.3	0.0	2220
Gross Cost	912.4	110.5	120.8	135.3	93.5	90.6	94.6	89.9	15.0	7.3	0.0	0.0	1669.9
Less PY Adv Proc	75.1												75.1
Plus CY Adv Proc	75.1												75.1
Net Proc (P-1)	912.4	110.5	120.8	135.3	93.5	90.6	94.6	89.9	15.0	7.3	0.0	0.0	1669.9
Initial Spares	2.3			1.0	0.9								4.2
Total Proc Cost	914.7	110.5	120.8	136.3	94.5	90.6	94.6	89.9	15.0	7.3	0.0	0.0	1674.1
Flyaway U/C	0.6	0.7	0.9	1.4	0.9	0.9	0.9	0.9	0.9				0.7
Wpn Sys Proc U/C	0.6	0.7	1.0	1.4	.9	.9	.9	.9	.9				.8

DESCRIPTION: The Army TACMS is a ground-launched missile system consisting of a surface-to-surface guided missile with an anti-personnel anti-materiel (APAM) warhead. The Army TACMS Block IA integrates global positioning system (GPS) components and increases the range of the Block I missile. The inherent GPS accuracies will be achievable independent of range. Army TACMS missiles are fired from the Multiple Launch Rocket System (MLRS) modified M270 launcher and are being deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries. Army TACMS includes Guided Missile and Launching Assembly; Test Set, Guided Missile System; Training Set, Guided Missile System; M-165; Trainer, Test Device, Guided Missile; M70; Modified M270 Launcher; and the Army TACMS Missile Facilities (ATMF).

JUSTIFICATION: The Army TACMS is air transportable and provides a deep fire missile system that operates in near all-weather conditions, day or night. It is used to attack tactical surface-to-surface missile sites, air defense missile sites, logistics elements and command/control/communications complexes. The Block IA missile will destroy high value targets at ranges approximately twice that of the current Block I. The Block IA will be especially suited for destroying enemy surface-to-surface missile system launchers.

FY99 funds will buy 96 ATACMS Block 1A missiles. FY97 includes a \$43.7M reprogramming; when approved the funding will buy an additional 60 missiles, raising the FY99 quantity to 157.

Exhibit P-5, Weapon Missiles Cost Analysis			Appropriation/ Budget Activity/Serial No: MISSILE PROCUREMENT / 2 / Other Missiles			P-1 Line Item Nomenclature: ATACMS SYSTEM SUMMARY (C98510)			Weapon System Type: Missile			Date: February 1998		
Missiles Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
Missile Hardware- Recurring														
		Prime Contract *	74504	120	621	106638	97	1099	71600	100	716	68064	96	709
		GFE							128			100		
		Flight Kits	378			1682			1848			1850		
		Engineering Services	16631			14806			4479			6500		
		Engineering Change Orders (ECOs)	2206			906			869			568		
		Fielding	579			110			550			200		
		Subtotal Missile Hardware	94298			124142			79474			77282		
Procurement Support														
		Project Management	5599			4412			4138			3820		
		Production Engineering Support	8731			4607			5523			5114		
		Test and Evaluation	4546			1811			3712			3579		
		Subtotal Procurement Support	18876			10830			13373			12513		
		TOTAL MISSILE FLYAWAY	113174			134972			92847			89795		
Command & Launch Integration														
		Command & Launch Integration Spt	1343			339			690			790		
		Subtotal C&L Integration	1343			339			690			790		
Support Cost														
		Missile Test Device	2758											
		ATMF Test and Support Equipment	3528											
		Subtotal Support Cost	6286											
Gross P-1 End Cost			120803			135311			93537			90585		
		Less: Prior Year Adv Proc												
		Net P-1 Full Funding Cost	120803			135311			93537			90585		
		PLUS P-1 CY Adv. Proc.												
		Other Non P-1 Costs												
		Initial Spares				963			943					
		MODS												
		TOTAL	120803			136274			94480			90585		
		*FY97 advance proc (\$43,735) awaiting congressional approval for transfer.												
		Upon approval, transferred \$ will procure 60 additional ATACMS msils.												

Exhibit P-5a, Budget Procurement History and Planning											
Appropriation / Budget Activity/Serial No: MISSILE PROCUREMENT/2/Other Missiles			Weapon System Type Missile		P-1 Line Item Nomenclature: ARMY TACTICAL MSL SYS (ATACMS)-SYS SUM (C98510)				Date: February 1998		
WBS Cost Elements: Fiscal Years		Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
Army TACMS Block I Missile		LMVS, Dallas, TX	SS/FP	MICOM	Nov-95	Mar-97	50	664	Yes		
FY 96											
Army TACMS Block IA Missile											
FY 96											
FY 97		LMVS, Dallas, TX	SS/FP	MICOM	Jun-96	Aug-97	70	590	Yes		Sep-96
FY 98		LMVS, Dallas, TX	SS/FP	MICOM	Apr-97	May-98	97	648	Yes		Sep-96
FY 99		LMVS, Dallas, TX	SS/FP	MICOM	Apr-98	May-99	100	716	Yes		Sep-96
		LMVS, Dallas, TX	SS/FP	MICOM	Oct-98	Mar-00	96	709	Yes		Sep-96
REMARKS: FY 98 buy LLTI award date - Dec 98											

FY 1998 / FY 1999 BUDGET PRODUCTION SCHEDULE										P-1 Item Nomenclature:		Date:						
ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)										February 1998								
Fiscal Year 98										Fiscal Year 99								
Calendar Year 98										Calendar Year 99								
M	F	R	FY	S	QTY	PROC	ACCEP.	BAL	L									
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Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
MISSILE PROCUREMENT / 2 / Other Missiles												ATACMS/BAT (CA6101)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty						30	80	130	115	190	1261	1806	
Gross Cost	0.0	0.0	0.0	0.0	0.0	49.1	66.7	98.8	106.2	174.4	1028.5	1523.6	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	0.0	0.0	0.0	0.0	0.0	49.1	66.7	98.8	106.2	174.4	1028.5	1523.6	
Initial Spares													
Total Proc Cost	0.0	0.0	0.0	0.0	0.0	49.1	66.7	98.8	106.2	174.4	1028.5	1523.6	
Flyaway U/C						1.4	0.8	0.8	0.9	0.9	0.8	0.8	
Wpn Sys Proc U/C						1.6	.8	.8	.9	.9	.8	.8	

DESCRIPTION: The Army Tactical Missile System Block II (ATACMS BLK II), a version of the currently fielded and combat-proven Army TACMS Block I missile, will be a ground launched, solid propellant, inertially guided (Global Positioning System (GPS) aided) missile system with 13 BATs or P3I BATs as its payload. It will be launched from the Multiple Launch Rocket System (MLRS) modified M270A1 launcher and will be deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries. The Army TACMS Block IIA (ATACMS Block IIA) will carry 6 BAT P3I submunitions as its payload rather than 12, extending the range. The ATACMS Block IIA will be launched from the M270A1 launcher in response to the same Command and Control (C2) nodes applicable to the Block I, Block IA, and Block II missiles. Since the Block IIA payload only houses 6 submunitions rather than 13, as in the Block II, it is capable of achieving extended ranges comparable to the Block IA. Production funding for the ATACMS Block IIA begins in FY02 for procurement of long lead items.

JUSTIFICATION: The primary mission of the ATACMS BLK II is to delay, disrupt, neutralize, or destroy armored combat vehicles/organization. ATACMS BLK II will carry and dispense BAT and BAT P3I submunitions deep in enemy territory where these submunitions will automatically track and destroy targets. Global Positioning System (GPS) technology will increase accuracy in flight. FY99 will buy 30 ATACMS Block II missiles, and support low rate initial production.

Exhibit P-5, Weapon Missiles Cost Analysis			Appropriation/ Budget Activity/Serial No: MISSILE PROCUREMENT / 2 / Other Missiles			P-1 Line Item Nomenclature: ATACMS/BAT (CA6101)			Weapon System Type: Missile			Date: February 1998		
ID	CD	Missiles Cost Elements	FY 96			FY 97			FY 98			FY 99		
			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
		Missile Hardware- Recurring Prime Contract (Includes Initial Prod Fac)										26979	30	899
		Flight Kits										3254		
		Engineering Services										567		
		Engineering Change Orders (ECOs)										856		
		Fielding										394		
		Subtotal Missile Hardware										32050		
		Procurement Support												
		Project Management										1661		
		Production Engineering Support										1985		
		Test and Evaluation										6428		
		Subtotal Procurement Support										10074		
		TOTAL MISSILE FLYAWAY										42124		
		Command & Launch Integration												
		Command & Launch Integration Spt										804		
		Subtotal C&L Integration										804		
		Support Cost												
		Missile Test Device										2560		
		Army Tac Msl Fac Test & Spt Equipment										3595		
		Subtotal Support Cost										6155		
		Gross P-1 End Cost										49083		
		Less: Prior Year Adv Proc												
		Net P-1 Full Funding Cost										49083		
		PLUS P-1 CY Adv. Proc.												
		Other Non P-1 Costs												
		Initial Spares												
		MODS												
		TOTAL										49083		

Exhibit P-5a, Budget Procurement History and Planning										Date: February 1998
Appropriation / Budget Activity/Serial No:		Weapon System Type:		P-1 Line Item Nomenclature:						
MISSILE PROCUREMENT / 2 / Other Missiles		Missile		ATACMS BLK II (CA6105)						
WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
ATACMS BLK II FY 99	LMVS, Dallas, TX	SS/FP	MICOM	Jan-99	Dec-00	30	899	No		Apr-98
REMARKS:										

Exhibit P-40, Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No:		P-1 Item Nomenclature:		Date: February 1998								
MISSILE PROCUREMENT / 2 / Other Missiles		Other Related Program Elements:		BAT (CA6100)								
Program Elements for Code B Items:		Code:										
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty						420	1050	1700	1820	2400	12310	19700
Gross Cost	0.0	0.0	0.0	0.0	0.0	100.4	156.4	204.9	187.7	225.2	989.6	1864.3
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	0.0	0.0	0.0	0.0	100.4	156.4	204.9	187.7	225.2	989.6	1864.3
Initial Spares												
Total Proc Cost	0.0	0.0	0.0	0.0	0.0	100.4	156.4	204.9	187.7	225.2	989.6	1864.3
Flyaway U/C						0.2	0.1	0.1	0.1	0.1	0.1	0.1
Wpn Sys Proc U/C						2	1	1	1	1	1	1

DESCRIPTION: The BAT submunition is an anti-armor, top attack submunition with acoustic and infrared (IR) seekers working in tandem for autonomous attack of operating armored vehicles. The BAT is a guided submunition that searches for, tracks, and destroys armored, mobile targets. The Pre-Planned Product Improvement (P3I) BAT uses millimeter wave, infrared, and acoustic seekers in tandem to attack additional target arrays which include cold stationary or dug-in targets and surface-to-surface missile transporter erector launchers.

JUSTIFICATION: The BAT submunition will be carried deep into enemy territory by the Army Tactical Missile System (ATACMS) Block II. It will be dispensed over numerous high-payoff targets to selectively attack and destroy individual targets. By utilizing acoustic technology, BAT has the advantage of a large footprint which allows it to compensate for target location errors.

Note: BAT is in LRIP in FY99.

Exhibit P-5, Weapon Missiles Cost Analysis		Appropriation/ Budget Activity/Serial No: MISSILE PROCUREMENT / 2 / Other Missiles		P-1 Line Item Nomenclature: BAT (CA6100)		Weapon System Type: Submunition		Date: February 1998	
ID	Missiles Cost Elements	FY 96		FY 97		FY 98		FY 99	
		TotalCost	Qty	UnitCost	TotalCost	TotalCost	Qty	UnitCost	UnitCost
		\$000	Each	\$000	\$000	\$000	Each	\$000	\$000
	Missile Hardware- Recurring Prime Contract (Includes Initial Prod. Facil.)							88341	420
	Engineering Services							1930	
	Engineering Change Orders (ECOs)							90271	
	Fielding							3943	
	Subtotal Missile Hardware							4929	
	Procurement Support							1282	
	Project Management							10154	
	Production Engineering Support							100425	
	Test and Evaluation								
	Subtotal Procurement Support								
	TOTAL MISSILE FLYAWAY								210
	Support Cost								
	Subtotal Support Cost								
	Gross P-1 End Cost							100425	
	Less: Prior Year Adv Proc								
	Net P-1 Full Funding Cost							100425	
	PLUS P-1 CY Adv. Proc.								
	Other Non P-1 Costs								
	Initial Spares								
	MODS								
	TOTAL							100425	

Exhibit P-5a, Budget Procurement History and Planning										Date: February 1998				
Appropriation / Budget Activity/Serial No.		Weapon System Type:		Submunition		P-1 Line Item Nomenclature:								
MISSILE PROCUREMENT/2/Other Missiles						BAT (CA6100)								
WBS Cost Elements: Fiscal Years		Contractor and Location		Contract Method and Type		Location of PCO		Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
BAT FY 99		Northrop Grumman Hawthorne, CA		SS/FPI		MICOM		Jan-99	Jun-00	420	210	Yes		Apr-98
REMARKS:														

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
MISSILE PROCUREMENT / 3 / Modification of Missiles												Patriot Mods (C50700)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	353.4	25.7	6.8	23.3	7.8	15.3	26.4	29.3	19.2	15.4	180.9	703.5	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	353.4	25.7	6.8	23.3	7.8	15.3	26.4	29.3	19.2	15.4	180.9	703.5	
Initial Spares	34.9	6.2	3.4	5.2	2.7	4.9	3.7	2.7	0.8		25.3	89.8	
Total Proc Cost	388.3	31.9	10.2	28.5	10.5	20.2	30.1	32.0	20.0	15.4	206.2	793.3	
Flyaway U/C													
Wpn Sys Proc U/C													

DESCRIPTION: The PATRIOT Weapon System Growth Program is in response to a Report of the Defense Science Board Task Force on PATRIOT Vulnerability (1978) (SECRET) and the Air Threat to Central Europe (1978-1988) ATCE-1988 (SECRET) dated 1 Aug 78, and was part of the Mid 1980 Army System Acquisition Review Council/Defense System Acquisition Review Council (ASARC/DSARC) process approving the initiation of PATRIOT production.

JUSTIFICATION: The above funding is required to support the planned system Growth Program P31 (Pre-planned Product Improvements), anticipated Materiel Changes which will add the following hardware enhancements/improvements to the PATRIOT Weapon System. Modification installation costs are included in the cost of the modification kits.

Exhibit P-40M Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No.		P-1 Item Nomenclature		Date							
MISSILE PROCUREMENT / 3 / Modification of Missiles		P-1 Item Nomenclature		February 1998							
Program Elements for Code B Items		Other Related Program Elements		P-1 Item Nomenclature							
Description		Fiscal Years									
OSIP NO.	Classification	FY96 & PRI	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	Total
RLCEU											
1-92-03-1233		0.0	0.0	2.9	8.8	12.1	14.6	14.7	11.6	54.9	119.6
Block VII											
1-88-03-1224		10.2	11.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	21.7
Weapon Control Computer (WCC) Upgrade											
1-88-03-1227		56.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.0
CDI Phase I											
1-92-03-1235		3.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1
Block VIII (RAM Mods)											
1-89-03-1230		0.0	0.0	4.5	6.5	7.0	9.0	4.5	3.8	126.0	161.3
Integrated Diagnostic Support System											
1-97-03-1244		0.0	6.1	0.0	0.0	4.7	3.1	0.0	0.0	0.0	13.9
Gem Plus/Minus											
1-97-03-1245		0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8
RLCEU (LINK 16/JTIDS)											
1-97-03-1246		0.0	0.0	0.0	0.0	2.6	2.6	0.0	0.0	0.0	5.2
Totals		70.0	23.3	7.8	15.3	26.4	29.3	19.2	15.4	180.9	387.6

INDIVIDUAL MODIFICATION																																																																														
MODIFICATION TITLE: RLCEU 1-92-03-1233										Date																																																																				
MODELS OF SYSTEMS AFFECTED: Radar, ECS, CRG																																																																														
DESCRIPTION / JUSTIFICATION:																																																																														
<p>The Remote Launch/Communication Enhancement Upgrade (RLCEU) effort focuses on improving communications at the "below" battalion level through the introduction of new switching equipment and a new communications processor at the battery level in conjunction with a conversion to Band IV UHF throughout the battalion. Additionally, the project will develop and field a remote launch capability permitting emplacement of a remote launcher farm in excess of 30 Km from the parent Engagement Control System (ECS). This project is required to meet PAC-3 requirements for increased battlespace, lethality and rate of fire; additionally Operational Requirement Document (ORD) requirements for interoperability and communications are satisfied by this effort.</p>																																																																														
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																																																																														
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Installation Schedule:																																																																														
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Pr Yr	FY 2002			FY 2003			FY 2004			FY 2005			Totals																																																																	
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METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 18 Months Contract Dates: FY 1997 2Q98 FY 1998 2Q99 Delivery Date: FY 1997 4Q99 FY 1999 4Q00																																																																														

INDIVIDUAL MODIFICATION													
Block VII 1-88-03-1224													
MODIFICATION TITLE (Cont):													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E													
PROCUREMENT													
Kit Quantity	253	6.6	69	10.8	10	0.3							332
Installation Kits													17.7
Installation Kits, Nonrecurring													
Equipment													
Equipment, Nonrecurring													
Engineering Change Orders													
Data													
Training Equipment													
Support Equipment													
Other													
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits	253	3.6	69	0.3	10	0.1							253
FY 1997 Eqpt -- Kits													3.6
FY 1998 Eqpt -- Kits													69
FY 1999 Eqpt -- Kits													0.3
FY 2000 Eqpt -- Kits													10
FY 2001 Eqpt -- Kits													0.1
FY 2002 Eqpt -- Kits													
FY 2003 Eqpt -- Kits													
TC Equip-Kits													
Total Installment	253	3.6	69	0.3	10	0.1							332
Total Procurement Cost		10.2		11.1		0.4							21.7

INDIVIDUAL MODIFICATION												Date	February 1998																																																																																																								
MODIFICATION TITLE: Weapon Control Computer (WCC) Upgrade 1-88-03-1227																																																																																																																					
MODELS OF SYSTEMS AFFECTED: ECS, ICC																																																																																																																					
DESCRIPTION / JUSTIFICATION:																																																																																																																					
<p>This task's objective is to increase (by four times) the speed and memory size of the current Weapon Control Computer (WCC) through replacement with a Very High Speed Integrated Circuit (VHSIC) WCC. The current WCC in the Engagement Control Station (ECS) and Information and Coordination Central (ICC) will be replaced by the VHSIC WCC. Peripheral devices which will permit the full utilization of the expanded WCC will be implemented by the replacement of the current Recovery Storage Unit (RSU) and the Mass Storage Unit (MSU) with an optical disk. This MC requires WCC software enhancements to be blocked with others in a Post Deployment Build 4 (PDB-4). The modification will increase central processing speed throughout and available memory. Current RAM hardware usage is at 95% eliminating future growth. VHSIC technology and expanded memory will accommodate future throughput and growth.</p>																																																																																																																					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																																																																																																																					
<table border="0" style="width:100%;"> <tr> <td style="width:50%; vertical-align: top;"> Planned 4QFY90 2QFY91 1QFY92 2QFY92 </td> <td style="width:50%; vertical-align: top;"> Accomplished 4QFY90 2QFY90 1QFY92 3QFY92 </td> </tr> </table>														Planned 4QFY90 2QFY91 1QFY92 2QFY92	Accomplished 4QFY90 2QFY90 1QFY92 3QFY92																																																																																																						
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<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> Preliminary Design Review Critical Design Review (CDR) Contractor Test and Evaluation (CTE) Development Test and Evaluation (DTE) </div> <div style="width: 5%;"></div> <div style="width: 45%;"></div> </div>																																																																																																																					
Installation Schedule:																																																																																																																					
<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</td> <td>110</td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>Outputs</td> <td>110</td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> </table>														Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs	110																				Outputs	110																			
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																	
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																	
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<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>To Complete</th><th>To</th> </tr> <tr> <td>Inputs</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td></td><td></td> </tr> <tr> <td>Outputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td>110</td><td>110</td> </tr> </table>														Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	To Complete	To	Inputs	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			Outputs																	110	110																													
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	To Complete	To																																																																																																			
Inputs	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																					
Outputs																	110	110																																																																																																			
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> METHOD OF IMPLEMENTATION: Contract Dates: FY 1997 Delivery Date: FY 1997 </div> <div style="width: 5%;"></div> <div style="width: 45%;"> ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 18 Months FY 1999 FY 1999 </div> </div>																																																																																																																					

INDIVIDUAL MODIFICATION																			February 1998	
Weapon Control Computer (WCC) Upgrade 1-88-03-1227																				
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E		27.2																		27.2
PROCUREMENT																				
Kit Quantity	110	49.9																	110	49.9
Installation Kits																				
Installation Kits, Nonrecurring Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	110	6.1																	110	6.1
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	110	6.1																	110	6.1
Total Procurement Cost		56.0																		56.0

INDIVIDUAL MODIFICATION											
MODIFICATION TITLE: CDI Phase I 1-92-03-1235										Date February 1998	
MODELS OF SYSTEMS AFFECTED: Radar											
DESCRIPTION / JUSTIFICATION:											
Provides improvements to the identification process and enhances air defense effectiveness by reducing the potential for fratricide and providing better battlefield management of missile expenditures.											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:											
<div style="display: flex; justify-content: space-between;"> <div> Preliminary Design Review Critical Design Review (CDR) Contractor Test and Evaluation (CTE) Development Test and Evaluation (DTE) </div> <div> <u>Planned</u> 4QFY90 3QFY91 2QFY92 2QFY92 </div> <div> <u>Accomplished</u> 1QFY91 4QFY91 3QFY92 1QFY94 </div> </div>											
Installation Schedule:											
		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Pr Yr											
Totals	1	2	3	4	1	2	3	4	1	2	3
Inputs	15	2	2	2							4
Outputs	13	2	2	2							
		FY 2002		FY 2003		FY 2004		FY 2005		Totals	
	1	2	3	4	1	2	3	4	1	2	3
Inputs											21
Outputs											21
METHOD OF IMPLEMENTATION:											
Contract Dates:				FY 1997 Nov 96		FY 1998		ADMINISTRATIVE LEADTIME:		6 Months	
Delivery Date:				FY 1997 May 97		FY 1998		PRODUCTION LEADTIME:		FY 1999 FY 1999	

INDIVIDUAL MODIFICATION													
Date February 1998													
MODIFICATION TITLE (Cont): CDI Phase I 1-92-03-1235													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E		14.6											14.6
PROCUREMENT													
Kit Quantity	19	3.1	2	0.2									21
Installation Kits													
Installation Kits, Nonrecurring Equipment													
Equipment, Nonrecurring													
Engineering Change Orders													
Data													
Training Equipment													
Support Equipment													
Other													
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits	19	0.7	2	0.1									19
FY 1997 Eqpt -- Kits													0.7
FY 1998 Eqpt -- Kits													0.1
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installment	19	0.7	2	0.1									21
Total Procurement Cost		3.8		0.3									4.1

INDIVIDUAL MODIFICATION															Date	February 1998					
MODIFICATION TITLE: Block VIII (RAM Mods) 1-89-03-1230																					
MODELS OF SYSTEMS AFFECTED: Radar, ECS, ICC, LS, BME, BMG, CRG																					
DESCRIPTION / JUSTIFICATION:																					
This modification provides corrections to problems in the field which have been identified and incorporated into ECPs. Corrections included in this modification involve improvements to the Radar, Engagement Control Station (ECS), Information and Coordination Central (ICC), Launching Station (LS), Battalion Maintenance Equipment/Group (BME/BMG), Communications Relay Group (CRG) and Intermediate Support Elements/Patriot Field Army Support Center (ISE/PFASC) Shop Sets. The purpose of this modification is the acquisition and installation of retrofit modification kits to bring fielded PATRIOT hardware up to the production baseline configuration.																					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																					
Major milestones not applicable.																					
Installation Schedule:																					
Inputs Outputs	Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Inputs Outputs	FY 2002		FY 2003				FY 2004				FY 2005				To		Totals				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
	103	102	57	56	56	56	50	50	50	50	75	75	75	75	75	2550	4543				
	103	103	102	57	56	56	56	50	50	50	50	75	75	75	75	2625	4543				
METHOD OF IMPLEMENTATION:																					
Contract Dates: FY 1997 FY 1998 Dec 97 Dec 98																					
Delivery Date: FY 1997 FY 1998 Jun 98 Jun 99																					
ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 6 Months																					

INDIVIDUAL MODIFICATION																		February 1998	
Block VIII (RAM Mods) 1-89-03-1230																		Date	
MODIFICATION TITLE (Cont):																			
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																			
PROCUREMENT																			
Kit Quantity			127	4.1	211	5.9	369	6.3	411	8.1	225	4.1	200	3.5	3000	113.4	4543	145.4	
Installation Kits																			
Installation Kits, Nonrecurring																			
Equipment																			
Equipment, Nonrecurring																			
Engineering Change Orders																			
Data																			
Training Equipment																			
Support Equipment																			
Other																			
Interim Contractor Support																			
Installation of Hardware																			
FY 1996 & Prior Eqpt -- Kits																			
FY 1997 Eqpt -- Kits			127	0.4	211	0.6	369	0.7	411	0.9	225	0.4	200	0.3	3000	12.6	3000	12.6	
FY 1998 Eqpt -- Kits																			
FY 1999 Eqpt -- Kits																			
FY 2000 Eqpt -- kits																			
FY 2001 Eqpt -- kits																			
FY 2002 Eqpt -- kits																			
FY 2003 Eqpt -- kits																			
TC Equip-Kits																			
Total Installment			127	0.4	211	0.6	369	0.7	411	0.9	225	0.4	200	0.3	3000	12.6	4543	15.9	
Total Procurement Cost				4.5		6.5		7.0		9.0		4.5		3.8		126.0		161.3	

INDIVIDUAL MODIFICATION											
MODIFICATION TITLE: Integrated Diagnostic Support System 1-97-03-1244										Date February 1998	
MODELS OF SYSTEMS AFFECTED:											
DESCRIPTION / JUSTIFICATION:											
At the fire unit level, maintenance monitors detect faults and automatically access diagnostic/repair procedures in electronic Tech Manuals (TM) and expert systems. Digital communications enable secure telemaintenance from weapons platform to factory for remote diagnostics and adjustments.											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:											
Major milestones not applicable.											
Installation Schedule:											
		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Pr Yr											
Totals	1	2	3	4	1	2	3	4	1	2	3
Inputs											
Outputs					7					7	
		FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2	3	4
5											
Inputs											
Outputs	5										19
METHOD OF IMPLEMENTATION:											
Contract Dates:		FY 1997		Feb 97		FY 1998		FY 1999		9 Months	
Delivery Date:		FY 1997		Oct 97		FY 1998		FY 1999		9 Months	

INDIVIDUAL MODIFICATION																				
Integrated Diagnostic Support System 1-97-03-1244																				
Date February 1998																				
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	7		7	5.9					7	4.5	5	3.0							19	13.4
Installation Kits																				
Installation Kits, Nonrecurring Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits	7		7	0.2															7	0.2
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits									7	0.2									7	0.2
FY 2001 Eqpt -- kits											5	0.1							5	0.1
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment			7	0.2					7	0.2	5	0.1							19	0.5
Total Procurement Cost				6.1						4.7		3.1								13.9

INDIVIDUAL MODIFICATION																	
													Date	February 1998			
MODIFICATION TITLE: Gem Plus/Minus 1-97-03-1245																	
MODELS OF SYSTEMS AFFECTED: PAC-2 Missile																	
DESCRIPTION / JUSTIFICATION:																	
<p>Modification of existing PAC-2 missiles. Provides Cruise Missile Defense performance improvements by retrofitting PAC-2 missiles during missile recertification cycle with a Surface Acoustic Wave (SAW) Oscillator and a Guidance Enhanced Missile (GEM) fuze.</p>																	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																	
Major milestones not applicable																	
Installation Schedule:																	
Inputs Outputs	Pr Yr	FY 1997			FY 1998			FY 1999			FY 2000			FY 2001			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs Outputs		FY 2002			FY 2003			FY 2004			FY 2005			Totals			
	1	2	3	4	1	2	3	4	1	2	3	4	Complete				
<p>METHOD OF IMPLEMENTATION:</p> <p>Contract Dates: FY 1997 Jan 98 FY 1998 FY 1999 PRODUCTION LEADTIME: 18 Months</p> <p>Delivery Date: FY 1997 Jul 99 FY 1998 FY 1999</p>																	

INDIVIDUAL MODIFICATION																		
Date February 1998																		
MODIFICATION TITLE (Cont): Gem Plus/Minus 1-97-03-1245																		
FINANCIAL PLAN: (\$ in Millions)																		
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																		
PROCUREMENT																		
Kit Quantity			75	5.3													75	5.3
Installation Kits																		
Installation Kits, Nonrecurring																		
Equipment																		
Equipment, Nonrecurring																		
Engineering Change Orders																		
Data																		
Training Equipment																		
Support Equipment																		
Other																		
Interim Contractor Support																		
Installation of Hardware																		
FY 1996 & Prior Eqpt -- Kits																		
FY 1997 Eqpt -- Kits			75	0.5													75	0.5
FY 1998 Eqpt -- Kits																		
FY 1999 Eqpt -- Kits																		
FY 2000 Eqpt -- kits																		
FY 2001 Eqpt -- kits																		
FY 2002 Eqpt -- kits																		
FY 2003 Eqpt -- kits																		
TC Equip-Kits																		
Total Installment			75	0.5													75	0.5
Total Procurement Cost				5.8														5.8

INDIVIDUAL MODIFICATION

MODIFICATION TITLE: RLCEU (LINK 16/JTIDS) 1-97-03-1246

MODELS OF SYSTEMS AFFECTED: ECS

DESCRIPTION / JUSTIFICATION:
<p>1. Project Overview: The project involves the development of a new software application for managing customer relationships (CRM). The primary goal is to enhance customer engagement and streamline sales processes.</p> <p>2. Scope: The project scope includes the design, development, testing, and deployment of the CRM system. Key features include user authentication, data management, and reporting tools.</p> <p>3. Timeline: The project is scheduled to start on 2023-10-01 and is expected to be completed by 2023-12-15, with a total duration of approximately 14 weeks.</p> <p>4. Resources: The project team consists of five members: a Project Manager, two Software Developers, a QA Tester, and a Business Analyst.</p> <p>5. Risks: Potential risks include delays in development, scope creep, and limited resources. Mitigation strategies include regular communication, strict adherence to the timeline, and resource allocation.</p> <p>6. Conclusion: The project is well-planned and has a clear path forward. Regular updates and communication will ensure the project stays on track and meets its objectives.</p>

This modification will integrate the hardware required for an M-109 van based Link-16 terminal, terminal control and communications processing equipment required to receive and process the Link-16 Joint Data Net information and to provide this information, in the PADIL Data Link (PADIL) format, to the PATRIOT Engagement Control Station (ECS). This will permit the PATRIOT firing battery to function as a limited participant (receive-only) in the joint net. Told-in tracks will be displayed in the Battery Communications Post and in the Engagement Control Station.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Major milestones not applicable

Installation Schedule:

[illegible][illegible]

METHOD OF IMPLEMENTATION:

Contract Dates:

Delivery Date:

PRODUCTION LEADTIME:	6	Months
----------------------	---	--------

FY 1999

FY 1999

FY 1998

FY 1998

FY 1997

FY 1997

METHOD OF IM

Dates:

Date:

INDIVIDUAL MODIFICATION																			Date		February 1998							
MODIFICATION TITLE (Cont):																			RLCEU (LINK 16/JTIDS) 1-97-03-1246									
FINANCIAL PLAN: (\$ in Millions)																												
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL									
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$								
RDT&E																												
PROCUREMENT																												
Kit Quantity									15	2.3	20	2.3							35	4.6								
Installation Kits																												
Installation Kits, Nonrecurring																												
Equipment																												
Equipment, Nonrecurring																												
Engineering Change Orders																												
Data																												
Training Equipment																												
Support Equipment																												
Other																												
Interim Contractor Support																												
Installation of Hardware																												
FY 1996 & Prior Eqpt -- Kits																												
FY 1997 Eqpt -- Kits																												
FY 1998 Eqpt -- Kits																												
FY 1999 Eqpt -- Kits																												
FY 2000 Eqpt -- kits									15	0.3									15	0.3								
FY 2001 Eqpt -- kits											20	0.3							20	0.3								
FY 2002 Eqpt -- kits																												
FY 2003 Eqpt -- kits																												
TC Equip-Kits																												
Total Installment									15	0.3	20	0.3							35	0.6								
Total Procurement Cost										2.6		2.6								5.2								

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
MISSILE PROCUREMENT / 3 / Modification of Missiles												P-1 Item Nomenclature:
Program Elements for Code B Items:												STINGER MODS (C20000)
Code:												Other Related Program Elements:
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	14.4	5.0	11.8	37.2	21.1	13.9	19.6	26.3	31.6	26.1		207.0
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	14.4	5.0	11.8	37.2	21.1	13.9	19.6	26.3	31.6	26.1		207.0
Initial Spares												
Total Proc Cost	14.4	5.0	11.8	37.2	21.1	13.9	19.6	26.3	31.6	26.1		207.0
Flyaway U/C	Not Applicable - This is a modification program											
Wpn Sys Proc U/C	Not Applicable - This is a modification program											
DESCRIPTION												
<p>STINGER Block I Missile Upgrades - Hardware and software modifications to the STINGER RMP Missile System improves performance against targets which are slow moving, employing advanced counter-measures, or operating at night. These STINGER Block I Upgrade modifications maintain compatibility with all current and planned command and launch platforms including Air-To-Air STINGER, AVENGER, and the gripstock used in shoulder fired applications.</p> <p>STINGER Block I Platform Upgrades - In order to take advantage of the Block I missile's improved capability, each firing platform must be modified. For Man Portable Air Defense System (MANPADS) gripstocks new Electronically Erasable Programmable Read Only Memory (EEPROMS) must be procured and installed in existing, fielded gripstocks. For Air-to-Air Stinger, Bradley Linebacker, and Avenger, new circuit card assemblies must be procured and installed in each systems Interface Electronics Assembly.</p> <p>Bradley Linebacker (formerly Bradley STINGER Fighting Vehicle - Enhanced (BSFV-E)) - The Bradley Linebacker is an air defense system based upon minimal upgrades to the currently fielded Bradley Stinger Fighting Vehicle-Manpads Under Armor (BSFV-MUA). Funding for Bradley Linebacker in FY99 and out is now budgeted in Wheeled and Tracked Combat Vehicles (WTCV) appropriation.</p> <p>JUSTIFICATION</p> <p>STINGER Block I Missile Upgrades - The STINGER-RMP Missile is currently deficient in engagements against head/tail-on and slow moving targets, counter-measures, and night time engagements. There is also a safety deficiency whereby aviation platforms must super-elevate to fire the missile. The STINGER Block I Upgrade materiel change was developed to correct these deficiencies. This materiel change was recommended as the near term solution by the Air-to-Air Missile General Officer's Steering Committee.</p> <p>STINGER Block I Platform Upgrades - In order to take advantage of the Block I missile's improved capability, each firing platform must be modified. Without modifications, Block I missiles fired from these platforms will perform as Stinger-RMP missiles, negating the Block I missile improved performance.</p>												

[illegible]

INDIVIDUAL MODIFICATION												Date	February 1998												
MODIFICATION TITLE: Stinger Block I Missile Upgrades 01-87-03-1510																									
MODELS OF SYSTEMS AFFECTED: Stinger-RMP Missile																									
DESCRIPTION / JUSTIFICATION:																									
<p>The STINGER Block I Missile Upgrade materiel change incorporates hardware and software modifications to the STINGER-RMP missile system to increase overall missile performance in certain engagement scenarios and resolve a key aviation deficiency which requires aviation platforms to super-elevate. The engagement scenarios in which missile performance improves include head/tail-on and slow moving targets, counter-measures, and night time engagements. These changes include hardware changes to the missile and software changes to the command and launch platforms which include Air-to-Air STINGER, AVENGER, and gripstocks used in shoulder-fired applications. This materiel change was recommended by Army leadership as the near term solution to the STINGER RMP deficiencies.</p>																									
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																									
<div style="display: flex; justify-content: space-around;"> <div> Begin Development Production Qualification Software Critical Design Review Software Performance Assessment </div> <div> 3rd Qtr, FY92 4th Qtr, FY95 2nd Qtr, FY96 2nd Qtr, FY97 </div> </div>																									
Installation Schedule:																									
Inputs Outputs	Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001							
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
		475	275	300	270	210	320	390	390	390	390	390	390	390	409	192	192	208	209	209	208				
		130	205	140	275	300	270	210	320	390	390	390	390	390	390	390	409	192	192	192	208				
Inputs Outputs	FY 2002		FY 2003				FY 2004				FY 2005				Totals										
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete								
	209	281	281	282	282	308	308	308	309	217	217	218	218	102	102	102	10427								
	209	209	209	281	281	282	282	308	308	308	309	217	217	218	218	102	10427								
METHOD OF IMPLEMENTATION:														ADMINISTRATIVE LEADTIME: 3 Months				PRODUCTION LEADTIME: 18 Months							
Contract Dates:														FY 1997 2nd Qtr, FY97				FY 1998 2nd Qtr, FY98				FY 1999 2nd Qtr, FY99			
Delivery Date:														FY 1997 4th Qtr, FY98				FY 1998 4th Qtr, FY99				FY 1999 4th Qtr, FY00			

INDIVIDUAL MODIFICATION																			February 1998	
Stinger Block I Missile Upgrades 01-87-03-1510																			Date	
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
RDT&E PROCUREMENT Kit Quantity Installation Kits Installation Kits, Nonrecurring Equipment Equipment, Nonrecurring Engineering Change Orders Data Training Equipment Support Equipment Other --- Linebacker Task Force XXI Interim Contractor Support	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
	1850	30.8	1987	3.7	1350		768		835		1126		1233		870		408		10427	34.5
		24.9		28.9		17.2		13.9		19.6		26.3		31.6		26.1		17.4		205.9
																				2.5

INDIVIDUAL MODIFICATION																																																																																																																																																																																																																				
Date														February 1998																																																																																																																																																																																																						
MODIFICATION TITLE: Stinger Block I Platform Upgrades TBD																																																																																																																																																																																																																				
MODELS OF SYSTEMS AFFECTED: Manpads, Avenger, Bradley Linebacker, OH-58D																																																																																																																																																																																																																				
DESCRIPTION / JUSTIFICATION: <p>In order to take advantage of the Block I missile's improved capability, each firing platform must be modified. For MANPADS gripstocks, new electronically erasable programmable read only memory (EEPROM) must be procured and installed in existing, fielded gripstocks. For Air-to-Air Stinger, Bradley Linebacker, and Avenger, new circuit card assemblies must be procured and installed in each system's interface Electronics Assembly. Without modifications, Block I missiles fired from these platforms will perform as Stinger-RMP missiles, negating the Block I missile improved performance.</p>																																																																																																																																																																																																																				
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: <p style="text-align: center;">Development has been completed.</p>																																																																																																																																																																																																																				
Installation Schedule: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>Outputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>Totals</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>Complete</th><th>Months</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td> </tr> <tr> <td>Outputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td> </tr> <tr> <td>Totals</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td>3796</td><td>3796</td> </tr> </tbody> </table>															Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																					Outputs																					Totals																					Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	Months	Inputs																			Outputs																			Totals																	3796	3796
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MODIFICATION TITLE: Bradley Linebacker TBD																																																																																																																																																																												
MODELS OF SYSTEMS AFFECTED: Bradley Stinger Fighting Vehicle - Manpads Under Armor (BSFV-MUA)																																																																																																																																																																												
DESCRIPTION / JUSTIFICATION: <p>The Bradley LINEBACKER, formerly the Bradley Stinger Fighting Vehicle-Enhanced (BSFV-E), is an air defense system based upon minimal upgrades to the currently fielded BSFV-MUA. The Bradley LINEBACKER provides heavy maneuver forces with dedicated air defense against a variety of threat platforms. The Bradley LINEBACKER is a Non-Development Item rapid acquisition procurement to upgrade the existing BSFV-MUA with the addition of Bradley LINEBACKER modification kit. The kit includes an integrated, externally mounted Standard Vehicle Mounted Launcher with a modified fire control. It fires up to four Stinger missiles while the crew remains under armor protection. The Bradley LINEBACKER fielding maximizes the utility of the FAADS C2I Kit and the Bradley Fighting Vehicle-Operational Desert Storm Kit, which are being fielded separately by CECOM and TACOM. This materiel solution corrects major Air Defense Artillery deficiencies in survivability, fire control, target acquisition and identification with a reduction in crew size as a force savings.</p>																																																																																																																																																																												
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>Operational test and evaluation</div> <div>September 1996</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>Production decision</div> <div>November 1996</div> </div>																																																																																																																																																																												
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INDIVIDUAL MODIFICATION																		February 1998	
MODIFICATION TITLE (Cont): Bradley Linebacker TBD																		Date	
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E		8.8																8.8	
PROCUREMENT																			
Kit Quantity	8		0		0												8		
Installation Kits																			
Installation Kits, Nonrecurring		1.5																1.5	
Equipment																			
Equipment, Nonrecurring																			
Engineering Change Orders																			
Data																			
Training Equipment																			
Support Equipment																			
Other																			
Interim Contractor Support																			
Proponency for Bradley Linebacker was transferred from Stinger PMO to Bradley PMO in FY97.																			
\$7.1M in FY97 moved from MIPA to WTCV through Omnibus reprogramming. FY98 \$3.7M executed in C21300.																			
Stinger Block I Missile Upgrades.																			
"Installation of Hardware" costs are included in "Equipment" above.																			
Installation of Hardware																			
FY 1996 & Prior Eqpt -- Kits	8																8		
FY 1997 Eqpt -- Kits																			
FY 1998 Eqpt -- Kits																			
FY 1999 Eqpt -- Kits																			
FY 2000 Eqpt -- kits																			
FY 2001 Eqpt -- kits																			
FY 2002 Eqpt -- kits																			
FY 2003 Eqpt -- kits																			
TC Equip-Kits																			
Total Installation	8																8		
Total Procurement Cost		1.5																1.5	

Exhibit P-40, Budget Item Justification Sheet										Date:	February 1998
Appropriation / Budget Activity/Serial No:		P-1 Item Nomenclature:		AVENGER MODS (CE8710)							
MISSILE PROCUREMENT / 3 / Modification of Missiles		Other Related Program Elements:		C14900 AVENGER SYSTEM SUMMARY, C15200 AVENGER TRAINING DEVICES, C16000 AVENGER PED MT STINGER (MYP)							
Program Elements for Code B Items:		Code:									
		A									
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty											
Gross Cost	9.5	10.0	0.0	0.0	8.4	8.5	7.0	15.8	2.9		62.2
Less PY Adv Proc											
Plus CY Adv Proc											
Net Proc (P-1)	9.5	10.0	0.0	0.0	8.4	8.5	7.0	15.8	2.9		62.2
Initial Spares			1.0								1.0
Total Proc Cost	9.5	10.0	1.0	0.0	8.4	8.5	7.0	15.8	2.9		63.2
Flyaway U/C											
Wpn Sys Proc U/C											
<p>DESCRIPTION: AVENGER is fielded in divisional and corps Short Range Air Defense (SHORAD) battalions and US Marine Corps units. The AVENGER system is a lightweight, highly mobile and transportable surface-to-air missile and .50 caliber machine gun system. Eight Stinger missiles and a .50 caliber machine gun are mounted on a heavy High Mobility Multi-purpose Wheeled Vehicle (HMMWV). The AVENGER is operated by a two-man crew for stationary or shoot-on-the-move defense against Unmanned Aerial Vehicles (UAV), cruise missiles, helicopters, and fixed-wing aircraft in all weather conditions.</p> <p>JUSTIFICATION: The Slew-to-cue (STC) upgrade accepts sensor track data from the Forward Area Air Defense Command, Control and Intelligence System (FAAD C2I) and automatically slews the AVENGER turret in azimuth and elevation, placing targets in the gunner's field of view. The STC provides a 55% increase in the number of engagements and a greater increase in the number of kills. The STC was approved by the Warfighting Rapid Acquisition Panel (WRAP) Council in Dec 96. Funding was approved in Mar 97 and provided through TRADOC for \$5.8M in FY 97 RDT&E dollars. Funds are provided to fund the STC through FY 04; funding required in outyears for modifications to defeat obsolescence of AVENGER system electronics for Army forces only.</p> <p>NOTE: Congress provided an additional \$7.2M in FY 98 on Avenger System Summary, which appropriately should be in this program, Avenger Mods. Details on the FY98 \$7.2M follow on the P-3a.</p>											

[illegible]

INDIVIDUAL MODIFICATION

MODIFICATION TITLE: AVENGER SLEW-TO-CUE

MODELS OF SYSTEMS AFFECTED:	AVENGER PED MT STINGER (MYP) 16000
<p> </p>	

DESCRIPTION / JUSTIFICATION:

AVENGER is fielded in divisional and corps SHORAD battalions and USMC units. The AVENGER system is a lightweight, highly mobile and transportable surface-to-air missile and .50 caliber machine gun system. Eight Stinger missiles and a .50 caliber machine gun are mounted on a heavy HMMWV. The AVENGER is operated by a two-man crew for stationary or shoot-on-the-move defense against UAVs, cruise missiles, helicopters, and fixed-wing aircraft in all weather conditions.

MODIFICATION: The Slew-to-cue (STC) upgrade accepts sensor track data from the FAAD C2I and automatically slews the AVENGER turret in azimuth and elevation, placing targets in the gunner's field of view. The STC provides a 55% increase in the number of engagements and a greater increase in the number of kills. The STC was approved by the WRAP Council in Dec 96. WRAP provided \$5.8M FY97 RDTE funds which will fund LRIP/Prototype contract. The STC will be embedded into the AVENGER Fire Control Computer

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

FUNDING RECEIVED 10/97

LRIP/PROTOTYPE CONTRACT AWARD FEB-APR 98 (Funded with WRAP R&D funds)

DELIVERIES (PROTOTYPE) APR - SEP 98 (These are R&D quantities and are not shown.)

TESTING (PROTOTYPE) JUN - SEP 98

MS III (PRODUCTION) AUG-OCT 98

Installation Schedule:

[illegible]

	FY 2002			FY 2003			FY 2004			FY 2005			To Complete	Totals
	1	2	3	4	1	2	3	4	1	2	3	4		
Inputs	10	10	10	10	26	27	27	27	3	2	2	25	25	446
Outputs	12	10	10	10	10	26	27	27	27	3	2	25	25	446

METHOD OF IMPLEMENTATION:	DELIVERY ORDER	ADMINISTRATIVE LEADTIME:	2 Months	PRODUCTION LEADTIME:	8 Months

Contract Dates:

Delivery Date:

INDIVIDUAL MODIFICATION																			Date	February 1998	
MODIFICATION TITLE (Cont):																			AVENGER SLEW-TO-CUE		
FINANCIAL PLAN: (\$ in Millions)																					
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL			
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
				28				52		53		40		107		9		289			
RDT&E																					
PROCUREMENT																					
Kit Quantity																					
Manufacturing Facilities																					
Hardware																					
CLS-Labor																					
CLS-Initial Spares																					
CLS-Initial Consumables																					
1st Dest Tran																					
Training																					
Log Demo/Test Spt																					
Dev/Update Manuals																					
PQT																					
Refurbish Kits																					
Gov NET,LSAR,TPS,SDT																					
Project Management																					
NOTE: Installation costs are included in the cost of the kits.																					
Installation of Hardware																					
FY 1996 & Prior Eqpt -- Kits																					
FY 1997 Eqpt -- Kits																					
FY 1998 Eqpt -- Kits																					
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- kits																					
FY 2001 Eqpt -- kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
TC Equip-Kits																					
Total Installment																					
Total Procurement Cost																					

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No.												February 1998
MISSILE PROCUREMENT / 3 / Modification of Missiles												P-1 Item Nomenclature:
Program Elements for Code B Items:												ITAS/TOW MODS (C61700)
Code:												Other Related Program Elements:
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	505.0	0.0	41.3	0.0	61.1	62.5	62.8	62.0	65.5	57.7		917.9
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	505.0	0.0	41.3	0.0	61.1	62.5	62.8	62.0	65.5	57.7		917.9
Initial Spares	25.1			2.3	5.4	6.6	4.2	4.3	4.2	4.1		56.1
Total Proc Cost	530.1	0.0	41.3	2.3	66.5	69.1	67.0	66.3	69.7	61.8		974.0
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: TOW Improved Target Acquisition System (ITAS) program is a technology insertion program to upgrade the current TOW Target Acquisition and Fire Control Subsystems. The TOW ITAS will provide improved target detection and acquisition range, improved probability of hit and enhanced fire control capabilities that will upgrade the anti armor capability of light forces using the TOW system. Technology insertion developed for ITAS horizontally applies to Bradley TOW upgrades. ITAS takes advantage of state of the art infrared Standard Advanced Dewar Assembly (SADA) II technology to detect and recognize enemy targets day or night at greater ranges and with greater resolution. With ITAS, the gunner can now utilize the full engagement range of TOW and Follow-On-To-TOW increasing lethality and survivability against armor and other targets. The embedded training software serves to increase gunner proficiency over that of the previous TOW system. ITAS will support the U.S. Army mission of crisis response to regionally based threats and allows for TOW to continue to be integral to the strategic principle of CONUS based force projection.

The missile modification Missile Ordnance Inhibit Circuit (MOIC) Materiel Change (MC) provides/installs MOICs (safety requirement) on Basic TOW, ITOW, and TOW 2 heat missiles used for training. The MOIC precludes flight motor ignition and S&A arming in the event of missile malfunction.

The objective of missile conversion and modification is to maintain a continuous source for training by utilizing older tactically obsolete missiles (Basic TOW, extended Range ITOW, and TOW 2), rather than procuring training missiles. Mod kit procurement will continue until these missiles are depleted.

The Missile Conversion MC converts Basic TOW, ITOW, and TOW 2 heat missiles to practice missiles by replacing the heat warhead with a practice warhead. It also provides for a Missile Ordnance Inhibit Circuit (MOIC-Safety Requirement) and an epoxy coated T250 maraging steel launch motor.

JUSTIFICATION: Funding is required for the ITAS program, which upgrades the detection recognition and fire control capabilities of the current Ground/High Mobility Multi-purpose Wheeled Vehicle (HMMWV)-Mounted TOW 2 System. A five year multiyear is planned for ITAS beginning in FY 99. Funding is also required to maintain the production of the above essential MCs. These MCs are necessary to meet training/safety standards and upgrades the current TOW. This enhances Army posture against regionally based threats, promotes effective crisis response and increases overall readiness.

INDIVIDUAL MODIFICATION

MODIFICATION TITLE: MISSILE CONVERSION (HEAT TO PRACTICE) MC-1-82-03-3020

MODELS OF SYSTEMS AFFECTED: ITAS/TOW MISSILE SYSTEM BGM 71A, C, D RTM 71A (C59300)

DESCRIPTION / JUSTIFICATION:

To convert TOW Basic, ITOW and TOW 2 heat missiles to practice missiles and to install a Missile Ordnance Inhibit Circuit (MOIC) on missiles used for training. To prevent flyback the MOIC opens the circuit between the missile battery and flight motor ignition, and the safe and arming unlatch mechanism in the event of delay in ignition of the flight motor. Epoxy coated T250 maraging steel was incorporated into a new design as a result of launch motor failures. (Probable cause was identified as case deterioration due to stress corrosion.)

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

N/A

Installation Schedule:

Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Totals																				
55213																				
55213																				

	FY 2002			FY 2003			FY 2004			FY 2005			To Complete	Totals
	1	2	3	4	1	2	3	4	1	2	3	4		
Inputs														
Outputs					725				1354	1354	1355	1355		65631
					725				1806	1806	1806	1806		65631

METHOD OF IMPLEMENTATION:

Contract Dates:

Delivery Date:

PRODUCTION LEADTIME:	15 Months
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FY 1999

FY 1999

24 Months

.....

LEADTIME:

1998

1998

INDIVIDUAL MODIFICATION																			February 1998	
Date																				
MODIFICATION TITLE (Cont):																				
MISSILE CONVERSION (HEAT TO PRACTICE) MC-1-82-03-3020																				
FINANCIAL PLAN: (\$ in Millions)																				
RDT&E PROCUREMENT Kit Quantity Installation Kits Installation Kits, Nonrecurring Equipment Equipment, Nonrecurring Engineering Change Orders Data Training Equipment Support Equipment Other Interim Contractor Support	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
	60213	21.7													5418	4.7			65631	26.4
	55213	12.6					3550	1.6							1450	0.7			60213	14.9
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	55213	12.6					3550	1.6							1450	0.7	5418	2.6	65631	17.5
Total Procurement Cost		34.3						1.6								5.4		2.6		43.9

INDIVIDUAL MODIFICATION														Date	February 1998			
MISSILE MODIFICATIONS (MOIC) MC-1-82-03-3021																		
MODIFICATION TITLE (Cont):																		
FINANCIAL PLAN: (\$ in Millions)																		
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																		
PROCUREMENT																		
Kit Quantity																		
Installation Kits																		
Installation Kits, Nonrecurring Equipment	35667	9.2											1000	0.4			36667	9.6
Equipment, Nonrecurring																		
Engineering Change Orders																		
Data																		
Training Equipment																		
Support Equipment																		
Other																		
Interim Contractor Support																		
Installation of Hardware																		
FY 1996 & Prior Eqpt -- Kits	34667	4.3											1000	0.4			35667	4.7
FY 1997 Eqpt -- Kits																		
FY 1998 Eqpt -- Kits																		
FY 1999 Eqpt -- Kits																		
FY 2000 Eqpt -- kits																		
FY 2001 Eqpt -- kits																		
FY 2002 Eqpt -- kits																		
FY 2003 Eqpt -- kits																1000	0.5	1000 0.5
TC Equip-Kits																		
Total Installment	34667	4.3											1000	0.4		1000	0.5	36667 5.2
Total Procurement Cost		13.5												0.4			0.5	14.8

INDIVIDUAL MODIFICATION											
										Date	February 1998
ITAS (IMPROVED TARGET ACQUISITION SYSTEM) MC-1-89-03-3028											
MODELS OF SYSTEMS AFFECTED: TOW Missile System Launcher (59300)											
DESCRIPTION / JUSTIFICATION:											
<p>TOW ITAS Program is a technology insertion program to upgrade the current TOW Target Acquisition and Fire Control subsystems. ITAS will provide improved target detection and acquisition range, improved probability of hit and enhanced fire control capabilities that will upgrade the anti armor capability of light forces using the TOW system.</p> <p>Two kits are used for testing.</p>											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:											
<div style="display: flex; justify-content: space-around;"> <div> <u>PLANNED</u> Feb 98 May 98 Aug 98 </div> <div> <u>ACCOMPLISHED</u> </div> </div>											
<div style="display: flex; justify-content: space-between;"> <div> LRIP II Production Decision FUE Milestone III Decision (Anticipate 5 year multiyear procurement, FY 99-03) </div> </div>											
Installation Schedule:											
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Totals		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4	
Inputs		30		36		21		24		27	
Outputs		60		8		4		60		60	
Totals		90		44		25		84		87	
Inputs		30		36		21		24		27	
Outputs		60		8		4		60		60	
Totals		90		44		25		84		87	
METHOD OF IMPLEMENTATION:											
Contract Dates:				FY 1997				FY 1998			
Delivery Date:				FY 1997				FY 1998			
ADMINISTRATIVE LEADTIME:				12 Months				PRODUCTION LEADTIME:			
FY 1997				2Q98				FY 1999			
FY 1997				2Q99				FY 1999			
FY 1997				2Q99				FY 1999			

INDIVIDUAL MODIFICATION																					Date	February 1998
MODIFICATION TITLE (Cont):																					MC-1-89-03-3028	
FINANCIAL PLAN: (\$ in Millions)																						
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL					
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$				
104.6	0.1	0.8	0.2															105.7				
25		87	96		115		125		148		116		453		1165							
31.2		55.1	46.4		50.5		50.7		58.6		45.8		179.8		518.1							
0.5		0.8	0.3		0.1		0.1		0.1		0.1		0.4		2.4							
2.5		4.2	4.0		5.3		5.7		6.3		5.1		21.0		54.1							
			7.0		5.8		4.9								17.7							
0.5		0.7	1.1		0.9		0.3		0.3		0.4		2.0		6.2							
1.3		0.3	1.5												3.1							
Installation of Hardware																						
FY 1996 & Prior Eqpt -- Kits		8		15		0.1										23		0.1				
FY 1997 Eqpt -- Kits				49		0.1		38		0.1						87		0.2				
FY 1998 Eqpt -- Kits								32		0.1		64		0.2		96		0.3				
FY 1999 Eqpt -- Kits										56		59		0.1		115		0.3				
FY 2000 Eqpt -- kits												11				125		0.3				
FY 2001 Eqpt -- kits														62		148		0.4				
FY 2002 Eqpt -- kits																116		0.3				
FY 2003 Eqpt -- kits																453		1.2				
TC Equip-Kits																555		1.7				
Total Installment				8		64		70		120		176		0.5		1163		3.1				
Total Procurement Cost		36.0		61.1		60.5		62.8		62.0		65.5		51.9		204.9		604.7				

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No.												February 1998
MISSILE PROCUREMENT / 3 / Modification of Missiles												MLRS MODS (C67500)
P-1 Item Nomenclature:												
Program Elements for Code B Items:												
Code:												
Other Related Program Elements:												
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	169.9	29.3	27.5	6.4	2.1	2.2	2.2	5.2	4.3	5.2	0.0	254.3
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	169.9	29.3	27.5	6.4	2.1	2.2	2.2	5.2	4.3	5.2	0.0	254.3
Initial Spares	9.4	1.3	2.1	1.8	1.0	0.6	0.5	0.9	0.9	0.9		19.3
Total Proc Cost	179.3	30.6	29.5	8.2	3.1	2.8	2.7	6.1	5.2	6.1	0.0	273.6
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: Modification kits are procured for previously manufactured Multiple Launch Rocket System (MLRS) launchers and the associated training and ground support equipment. The following page provides a list of approved modifications.

JUSTIFICATION: The FY99 program funds a Fire Suppression Change, Interim Improved Position Determining System Launcher, and Obsolescence Mitigation/Engineering Change Proposal Reliability Integration.

Exhibit P-40M Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No.				Date		February 1998					
MISSILE PROCUREMENT / 3 / Modification of Missiles				P-1 Item Nomenclature		MLRS MODS (C67500)					
Program Elements for Code B Items				Code		Other Related Program Elements					
Description				Fiscal Years							
OSIP NO.	Classification	FY 96 & Pr	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	Total
Improved Electronic Unit (IEU) (No P3a Set)											
1-84-03-0502		71.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.6
Launcher Loader Module Improvements (LLM)											
1-85-03-0508		33.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.5
Carrier Improvements Phase IV											
1-94-03-0520		3.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5
Transmission Electronic Controller (TEC)											
1-94-03-0522		26.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.0
Fire Suppression Change											
1-94-03-0525		0.0	0.9	1.9	0.1	0.2	0.2	0.0	0.0	0.0	3.3
Interim IPDS Launcher											
1-94-03-0528		16.3	3.3	0.0	1.3	1.2	1.2	1.2	1.2	1.2	25.7
Interim MS Launcher (No P3a Set)											
1-94-03-0529		9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9
Hoist Carriage Assembly (No P3a Set)											
1-95-03-0530		2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
Selective Availability Anti-Spoofing Module (SAASM) (No P3a Set)											
1-97-03-0534		0.0	0.0	0.0	0.0	0.4	2.9	0.0	0.0	0.0	3.3
JTA-A (No P3a Set)											
1-98-03-0537		0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.8	2.8	4.9
Obsolescence Mitigation/ECP Reliability Integration (No P3a Set)											
1-95-03-Obse		3.3	0.7	0.2	0.8	0.4	0.9	1.0	1.2	1.2	8.5
Totals											
		167.3	6.4	2.1	2.2	2.2	5.2	4.3	5.2	5.2	194.9

INDIVIDUAL MODIFICATION													
MODIFICATION TITLE: Launcher Loader Module Improvements (LLM) 1-85-03-0508										Date: February 1998			
MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)													
DESCRIPTION / JUSTIFICATION:													
<p>This modification retrofits fielded vehicles for the following: Adds new metal blast panels to prevent damage to front launcher cage structure and blast doors; installs new environmentally sealed limit switches; welds in stiffening plate to motor pump assembly; provides moisture tight cover to the azimuth resolver; and adds support lugs and welds and adds a reinforcement to the aft corner post. These improvements are required to correct operational deficiencies identified during Operational Test III and subsequent fielding. This modification accomplishes retrofit of the fielded vehicles as part of the Block Mod Effort in conjunction with the hoist improvement.</p>													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:													
Development complete - incorporated into current production.													
Installation Schedule:													
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
Totals		1	2	3	4	1	2	3	4	1	2	3	4
Inputs													
Outputs													
Totals		433											
433													
		FY 2002		FY 2003		FY 2004		FY 2005		Totals			
1		2	3	4	1	2	3	4	1	2	3	4	
Inputs													
Outputs													
Totals													
433													
433													
METHOD OF IMPLEMENTATION: Depot Field App													
ADMINISTRATIVE LEADTIME:													
PRODUCTION LEADTIME:													
Contract Dates: FY 1997 FY 1998 FY 1999													
Delivery Date: FY 1997 FY 1998 FY 1999													

INDIVIDUAL MODIFICATION													
Launcher Loader Module (LLM) Improvements 1-85-03-0508													
Date February 1998													
MODIFICATION TITLE (Cont):													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E													
PROCUREMENT													
Kit Quantity													
Installation Kits													
Installation Kits, Nonrecurring													
Equipment	433	22.0											433 22.0
Equipment, Nonrecurring													
Engineering Change Orders													
Data													
Training Equipment													
Support Equipment													
Other													
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits	433	11.3											433 11.3
FY 1997 Eqpt -- Kits													
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installment	433	11.3											433 11.3
Total Procurement Cost		33.3		0.2									33.5

INDIVIDUAL MODIFICATION											
MODIFICATION TITLE: Carrier Improvements Phase IV 1-94-03-0520										Date: February 1998	
MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)											
DESCRIPTION / JUSTIFICATION:											
<p>This modification is a consolidation of nine (9) Class I Engineering Change Proposals addressing reliability, availability, maintainability, and dependability (RAM-D). Improvements include the addition of a fuel system heater valve, improved cab ventilation duct system, speedometer relocater, and a gas particulate filter unit plug for the nuclear biological chemical heater. This modification also corrects four (4) safety hazards by improving the commander's work station, adding a map light for tactical conditions, and provides measures to prevent the existing engine compartment fire extinguisher from being inadvertently discharged.</p>											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:											
Development complete - incorporated into current production.											
Installation Schedule:											
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Totals		1	2	3	4	1	2	3	4	1	2
Inputs		706	75	70							
Outputs		698	8		145						
		FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1		2	3	4	1	2	3	4	1	2	3
Inputs											
Outputs											851
										851	
METHOD OF IMPLEMENTATION: Depot Field App											
Contract Dates: FY 1997											
Delivery Date: FY 1997											
ADMINISTRATIVE LEADTIME: 8 Months											
PRODUCTION LEADTIME: 6 Months											
FY 1999											
FY 1999											

INDIVIDUAL MODIFICATION														Date		February 1998				
MODIFICATION TITLE (Cont):																				
Carrier Improvements Phase IV 1-94-03-0520																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring Equipment	706	1.1	145	0.2															851	1.3
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	698	2.4	8																706	2.4
FY 1997 Eqpt -- Kits			145	0.8															145	0.8
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	698	2.4	153	0.8															851	3.2
Total Procurement Cost		3.5		1.0																4.5

INDIVIDUAL MODIFICATION											
MODIFICATION TITLE: Transmission Electronic Controller (TEC) 1-94-03-0522										Date February 1998	
MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)											
DESCRIPTION / JUSTIFICATION:											
<p>The TEC, which is an automatic electronically controlled transmission, upgrades the previous hydromechanical transmission. The benefits of the TEC modification are increased power availability, ability to tow in neutral, decreased maintenance, improvements in slope capability, shift synchronism, fuel consumption, cold temperature performance, and maneuverability in restricted areas. Through the modification of the MLRS fleet of vehicles, this will allow a commonality of transmissions between all vehicle subsystems for the M270 MLRS. The equipment buy includes 100 spares.</p>											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:											
Development complete - incorporated into current production.											
Installation Schedule:											
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Totals		1	2	3	4	1	2	3	4	1	2
Inputs		690									
Outputs		13									
					13						
Totals		703									
Inputs											
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INDIVIDUAL MODIFICATION														Date		February 1998				
MODIFICATION TITLE (Cont):														Transmission Electronic Controller (TEC) 1-94-03-0522						
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment	690	19.2	13	0.2															703	19.4
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits	590	7.5	13	0.1															590	7.5
FY 1998 Eqpt -- Kits																			13	0.1
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	590	7.5	13	0.1															603	7.6
Total Procurement Cost		26.7		0.3																27.0

INDIVIDUAL MODIFICATION																
MODIFICATION TITLE: Fire Suppression Change 1-94-03-0525										Date						
February 1998																
MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)																
DESCRIPTION / JUSTIFICATION:																
<p>The purpose of this modification is to comply with Department of Defense Directive 6050.9 for the elimination of chlorofluorocarbons and halons. The objective of this modification is to identify and eliminate all ozone depleting chemicals and all ozone depleting substances. The initial phase of this program directs modification of mounting brackets to allow CO2 bottles to be used in lieu of the current 2.75 pound halon bottles. Swap-out for the hand-held bottles is being done by the U.S. Army Tank-Automotive and Armaments Command and began 2Q97. The second phase will direct the modification and/or conversion of the 7 pound engine compartment halon bottle to an alternative substance. FY97 buys hand-held fire extinguishers with a 4 month production lead time. FY98 buys fixed fire extinguishers with a 12 month production lead time.</p>																
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																
Will be incorporated into production.																
Installation Schedule:																
Inputs Outputs	FY 1997		FY 1998			FY 1999			FY 2000			FY 2001				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	100	300	457		100	100	100	100	100	100	100	69				
	4	70	301	209	138	79	56	49	9	9	20	112	112	82	59	157
																135
																125
Inputs Outputs	FY 2002		FY 2003			FY 2004			FY 2005			Totals				
	1	2	3	4	1	2	3	4	1	2	3	4	Complete			
																1726
																1726
METHOD OF IMPLEMENTATION: Depot Field App ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 12 Months Contract Dates: FY 1997 FY 1998 FY 1999 FY 1999 Delivery Date: FY 1997 FY 1998 FY 1999																

INDIVIDUAL MODIFICATION																		Date	February 1998		
MODIFICATION TITLE (Cont):																		Fire Suppression Change 1-94-03-0525			
FINANCIAL PLAN: (\$ in Millions)																					
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Kit Quantity																					
Installation Kits																					
Installation Kits, Nonrecurring																					
Equipment			857	0.8	869	1.7													1726	2.5	
Equipment, Nonrecurring																					
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
Other																					
Interim Contractor Support																					
Installation of Hardware																					
FY 1996 & Prior Eqpt -- Kits																					
FY 1997 Eqpt -- Kits			375	0.1	482	0.2													857	0.3	
FY 1998 Eqpt -- Kits							87	0.1	365	0.2	417	0.2						869	0.5		
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- kits																					
FY 2001 Eqpt -- kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
TC Equip-Kits																					
Total Installment			375	0.1	482	0.2	87	0.1	365	0.2	417	0.2						1726	0.8		
Total Procurement Cost				0.9		1.9		0.1		0.2		0.2							3.3		

INDIVIDUAL MODIFICATION											
Date										February 1998	
MODIFICATION TITLE: Interim Improved Position Determining System (IPDS) Launcher 1-94-03-0528											
MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)											
DESCRIPTION / JUSTIFICATION: <p>A special interim launcher configuration is required to allow the current M270 platform to fire all of its existing fielded M270 Family of Munitions and incorporate a new requirement to fire the Block IA, Army Tactical Missile System (TACMS). The Block IA missile will be fielded in 1QFY98 and will require Global Positioning System (GPS) interface at time of launch. This modification must be accelerated because the pre-planned product improvement for GPS was not planned until the fielding of the Position Navigational Unit with the Improved Fire Control System in FY 00. The modification will incorporate the IPDS Line Replaceable Unit, a GPS antenna, associated cabling with armor protection, hoist bumper pads, a modification to the existing M68 Missile/Launch Pod Assembly trainer, and sufficient Random Access Memory, with the Non Volatile Memory Module to support the software loaded into the Improved Electronic Unit.</p> <p>Installation is included in the cost of the modification kit.</p>											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: <p>Will be integrated into launchers as an interim program in support of Army TACMS Block 1A.</p>											
Installation Schedule:											
		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Pr Yr		1	2	3	4	1	2	3	4	1	2
Totals		6		20		5					
Inputs											
Outputs											
		FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1		2	3	4	1	2	3	4	1	2	3
Totals		35		35		35		35		35	
Inputs											
Outputs											
METHOD OF IMPLEMENTATION: Contract											
Contract Dates: FY 1997											
Delivery Date: FY 1997											
ADMINISTRATIVE LEADTIME: 6 Months											
PRODUCTION LEADTIME: 12 Months											
FY 1999											
FY 1999											

INDIVIDUAL MODIFICATION													
Date February 1998													
Interim Improved Position Determining System Launcher 1-94-03-0528													
MODIFICATION TITLE (Cont):													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E													
PROCUREMENT													
Kit Quantity													
Installation Kits, Nonrecurring													
Equipment	29	16.1	6	1.9									35
Equipment, Nonrecurring													18.0
Engineering Change Orders													
Data													
Training Equipment													
Support Equipment													
Other													
Interim Contractor Support		0.2		1.4			1.3	1.2	1.2	1.2	1.2	1.2	8.9
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits													
FY 1997 Eqpt -- Kits													
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installment		16.3		3.3			1.3	1.2	1.2	1.2	1.2	1.2	26.9
Total Procurement Cost													

INDIVIDUAL MODIFICATION																																																																																																																																																																																																														
Date													February 1998																																																																																																																																																																																																	
MODIFICATION TITLE: Obsolescence Mitigation/Engineering Change Proposal Reliability Integration 1-95-03-Obsec																																																																																																																																																																																																														
MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)																																																																																																																																																																																																														
DESCRIPTION / JUSTIFICATION: <p>Technology obsolescence is dictating the replacement of many launcher components. Because of rapid electronic obsolescence, this modification plans for future replacement of launcher electronic components. Circuit Cards in the Line Replaceable Units e.g., Improved Electronic Unit and Fire Control Unit, are already obsolete or rapidly approaching obsolescence. The funding on this program will procure modification kits which will incorporate improved components necessary to replace parts no longer available. In addition, this modification will reestablish the MLRS baseline at the optimal configuration for integration of Improved Fire Control System and Improved Launcher Mechanical System (MC No. 0519 and 0526) by aiding in the calibration of the system, providing required accuracy levels for new and future munitions, increasing reliability of early configuration of the launcher which reduces operational and support costs, and eliminating noise and multiple software requirements. The removal of minimal or poor performance components that have been identified is considered necessary to assure configuration control and compatibility within technical interfaces.</p>																																																																																																																																																																																																														
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: <p>Will incorporate ongoing obsolescence analysis and determination into production.</p>																																																																																																																																																																																																														
Installation Schedule: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>Inputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>Outputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th rowspan="2">To Complete</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td> </tr> <tr> <td>Inputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td> </tr> <tr> <td>Outputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td> </tr> </tbody> </table>															Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	1																				Inputs																					Outputs																						FY 2002				FY 2003				FY 2004				FY 2005				To Complete	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	1																	Inputs																		Outputs																	
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METHOD OF IMPLEMENTATION: <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 33%;">Contract Dates: FY 1997</td> <td style="width: 33%;">ADMINISTRATIVE LEADTIME: FY 1998</td> <td style="width: 33%;">PRODUCTION LEADTIME: FY 1999</td> </tr> <tr> <td>Delivery Date: FY 1997</td> <td>FY 1998</td> <td>FY 1999</td> </tr> </table>															Contract Dates: FY 1997	ADMINISTRATIVE LEADTIME: FY 1998	PRODUCTION LEADTIME: FY 1999	Delivery Date: FY 1997	FY 1998	FY 1999																																																																																																																																																																																										
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Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
MISSILE PROCUREMENT / 4 / Spares and Repair Parts												P-1 Item Nomenclature:
Program Elements for Code B Items:												SPARES AND REPAIR PARTS (CA0250)
Code:												Other Related Program Elements:
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	2657.4	34.1	11.5	10.3	11.1	23.7	19.2	25.1	26.2	25.5	41.5	2885.6
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	0.0	11.5	10.3	11.1	23.7	19.2	25.1	26.2	25.5	41.5	194.1
Initial Spares												
Total Proc Cost	0.0	0.0	11.5	10.3	11.1	23.7	19.2	25.1	26.2	25.5	41.5	194.1
Flyaway U/C												
Wpn Sys Proc U/C												
Description: Provides for procurement of spares to support initial fielding of new or modified end items.												
Justification: The funds in this account procure depot level reparable (DLR) secondary items from the Supply Management, Army (SMA) activity of the Defense Business Operations Fund. To provide initial support, funds are normally required in the same year that end items are fielded. Initial spares breakout:												
System	FY 1996	FY 1997	FY 1998	FY 1999								
Javelin				4.7								
MLRS Launcher	5.1		1.0	6.9								
ATACMS		1.0	1.0									
Patriot Mods	3.4	5.2	2.7	4.9								
Avenger Mods	1.0											
ITAS/TOW Mods		2.3	5.4	6.6								
MLRS Mods	2.0	1.8	1.0	0.6								
Total	11.5	10.3	11.1	23.7								

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
MISSILE PROCUREMENT / 5 / Support Equipment and Facilities												P-1 Item Nomenclature:
Program Elements for Code B Items:												AIR DEFENSE TARGETS (C93000)
Code:												Other Related Program Elements:
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	357.9	8.2	6.6	6.2	1.0	2.5	2.4	2.5	2.5	2.5	0.0	392.3
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	357.9	8.2	6.6	6.2	1.0	2.5	2.4	2.5	2.5	2.5	0.0	392.3
Initial Spares	1.3											1.3
Total Proc Cost	359.2	8.2	6.6	6.2	1.0	2.5	2.4	2.5	2.5	2.5	0.0	393.6
Fltway U/C												
Wpn Sys Proc U/C												

DESCRIPTION:
The Air Defense Targets program provides fixed wing, rotary wing, ballistic and towed targets, target control systems and ancillary equipment for worldwide active Army and reserve component air defense training consisting of guns live fire and precision gunnery system (PGS) training, quality assurance, lot acceptance, production qualification, and first article tests.
During the budget years, only 1/5th scale Remotely Piloted Vehicle Target (RPVT) and ancillary hardware consisting of scoring equipment in support of gun and PGS training will be procured.

JUSTIFICATION:
In support of soldier training, targets are provided to support fielded AVENGER, MANPADS, AIR-TO-AIR-STINGER, PATRIOT, Bradley STINGER Fighting Vehicle (BSFV) and LINEBACKER. Major items of target hardware which support or will support soldier training include MQM-107, Radio Controlled Miniature Aerial Target (RCMAT), Ballistic Aerial Target System (BATS), 1/5th Scale RPVT, ballistic missile target, towed training targets, target control systems and ancillary equipment. Training requirements are generated by DA major field commands, Training Centers, and Division Level Commands. These field requirements have been scrubbed against fielding and force restructuring plans, and are consistent with approved training doctrine.

Exhibit P-5, Weapon Missiles Cost Analysis			Appropriation/ Budget Activity/Serial No: MISSILE PROCUREMENT / 5 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AIR DEFENSE TARGETS (C93000)			Weapon System Type:			Date: February 1998		
Missiles Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
MQM-107														
-Operating Costs			1853			1900			434			406		
-Other Costs			780			732			537			1026		
SubTotal MQM-107			2633			2632			971			1432		
Non-Recurring Costs														
Total MQM-107			2633			2632			971			1432		
RCMAT														
-Operating Costs			52			50								
-Other Costs			22			20								
SubTotal RCMAT			74			70								
1/5th SCALE														
-Hardware			176	112	2	618							156	3
-Operating Costs			60			118						165		
-Other Costs			99			282						127		
SUBTOTAL			335			1018						760		
BATS														
-Hardware			874	157	6	425						34		
-Operating Costs			109			55						14		
-Other Costs			414			184						48		
SUBTOTAL			1397			664								
TOWED TARGETS														
-Operating Costs			77			54						57		
-Other Costs			32			20						23		
SUBTOTAL			109			74						80		
ANCILLARY/AUGMENTATION														
-Hardware			909	500	2	881	440	2				68	34	2
-Operating Costs			532			372						99		
-Other Costs			606			479						47		
SUBTOTAL			2047			1732						214		
BALLISTIC MISSILE TARGET														
-Hardware														
-Operating Costs														
-Other Costs														
SUBTOTAL														

Exhibit P-5, Weapon Missiles Cost Analysis		Appropriation/ Budget Activity/Serial No: MISSILE PROCUREMENT / 5 / Support Equipment and Facilities		P-1 Line Item Nomenclature: AIR DEFENSE TARGETS (C93000)		Weapon System Type:		Date: February 1998		
Missiles		FY 96		FY 97		FY 98		FY 99		
Cost Elements		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
SubTotal Support Cost										
Gross P-1 End Cost		6595			6190			971	2534	
Less: Prior Year Adv Proc										
Net P-1 Full Funding Cost		6595			6190			971	2534	
PLUS P-1 CY Adv. Proc.										
Other Non P-1 Costs										
Initial Spares										
MODS										
TOTAL		6595			6190			971	2534	

Exhibit P-5a, Budget Procurement History and Planning										Date:
Appropriation / Budget Activity/Serial No:										February 1998
MISSILE PROCUREMENT / 5 / Support Equipment and Facilities										
Weapon System Type:										
P-1 Line Item Nomenclature:										
AIR DEFENSE TARGETS (C93000)										
WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
Fiscal Years										
1/5th SCALE										
FY99										
-Hardware	Continental RPV Barslow, CA	Comp FFP	AMCOM	Oct-98	Dec-98	156	3	Yes		N/A
ANCILLARY/AUGMENTATION										
FY99										
-SCORING Ground Stations	Cartwright Electronics, Inc. Fullerton, CA	Only Source FFP	AMCOM	Nov-98	Jul-99	2	34	No		N/A
REMARKS:										

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
MISSILE PROCUREMENT / 5 / Support Equipment and Facilities												ITEMS LESS THAN \$2.0M (MISSILES) (CL2000)	
Program Elements for Code B Items:												Other Related Program Elements:	
Code:												A	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	32.9	1.2	0.8	1.0	0.9	0.9	1.0	1.0	1.1	1.1	0.0	41.9	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	32.9	1.2	0.8	1.0	0.9	0.9	1.0	1.0	1.1	1.1	0.0	41.9	
Initial Spares													
Total Proc Cost	32.9	1.2	0.8	1.0	0.9	0.9	1.0	1.0	1.1	1.1	0.0	41.9	
Flyaway U/C													
Wpn Sys Proc U/C													

DESCRIPTION: Provides for procurement of various tools and shop sets to support the Army's missile systems worldwide.

JUSTIFICATION: Funding is required for procurement of tool and shop sets to support the following systems:

MLRS
TOW
AVENGER

Exhibit P-5, Weapon Missiles Cost Analysis		Appropriation/ Budget Activity/Serial No: MISSILE PROCUREMENT / 5 / Support Equipment and Facilities				P-1 Line Item Nomenclature: ITEMS LESS THAN \$2.0M (MISSILES) (CL2000)				Weapon System Type:		Date: February 1998		
Missiles Cost Elements		ID	FY 96		FY 97		FY 98		FY 99					
		CD	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
ALL ARE MISSILE TOOL KITS. NO MODS														
1. MLRS COMPONENTS ASSEMBLY	A		251 215			485 260			454 237			459 242		
2. TOW COMPONENTS ASSEMBLY	A		65 35			16 8			16 8			14 6		
3. AVENGER COMPONENTS ASSEMBLY	A		165 89			142 78			140 73			132 69		
TOTAL			820			989			928			922		
NOTE: EACH SYSTEM HAS MORE THAN ONE KIT WITH VARYING QUANTITIES AND UNIT COSTS FOR EACH KIT.														

Exhibit P-40, Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No:				Date:				February 1998				
MISSILE PROCUREMENT / 5 / Support Equipment and Facilities				P-1 Item Nomenclature:				MISSILE DEMILITARIZATION (HL2000)				
Program Elements for Code B Items:				Code:				Other Related Program Elements:				
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	0.0	1.6	1.5	1.5	1.5	1.4	1.4	1.5	1.5	0.0	12.0
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	0.0	1.6	1.5	1.5	1.5	1.4	1.4	1.5	1.5	0.0	12.0
Initial Spares												
Total Proc Cost	0.0	0.0	1.6	1.5	1.5	1.5	1.4	1.4	1.5	1.5	0.0	12.0
Flyaway U/C												
Wpn Sys Proc U/C												

Description: The Missile Demilitarization Program provides for the demilitarization of U.S. Army missiles and missile components that are obsolete or excess to Army requirements following the guidelines of the Resource Conservation and Recovery Act.

Justification: The backlog of missiles requiring demilitarization is a growing concern of the Department of the Army. Changes during the past few years in the world wide political environment have resulted in drastic changes in military strategies. Reduced requirements of prepositioned military forces, retrograde of weapon system assets from Europe and major changes in war reserve planning have placed a tremendous strain on the CONUS wholesale storage base. Currently there are some 52,000 missiles and 100,000 missile components utilizing 99 premium storage igloos that require demilitarization. Specifically, the funding in FY99 will continue the process of demilitarization of priority one (obsolete, excess, environmental concern and using valuable storage space) missiles, i.e., Shillelagh.

Exhibit P-5, Weapon Missiles Cost Analysis			Appropriation/ Budget Activity/Serial No. MISSILE PROCUREMENT / 5 / Support Equipment and Facilities			P-1 Line Item Nomenclature: MISSILE DEMILITARIZATION (HL2000)			Weapon System Type:			Date: February 1998		
Missiles Cost Elements			FY 96			FY 97			FY 98			FY 99		
			TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
SHILLELAGH		CD	1,080	7,560	0	750	6,174	0	758	5,500	0	785	5,600	0
SS-11 Environmental Assessment			24			166	3,165	0	191	3,272	0			
NIKE-HERC						121	200		335	494		245	353	
REDEYE			200	432	0	5	48	0						
ROLAND Environmental Assessment			24			68	100		50	100	1	123	237	1
HAWK Environmental Assessment			24			75	67		56	100	1	147	220	
CHAPARRAL Environmental Assessment			24			98	120					166	225	
TOW Motors						246	29,356	0						
MISC Demil			267						76					
TOTAL			1,643			1,529			1,466			1,466		

Exhibit P-40, Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No:										Date:		February 1998
MISSILE PROCUREMENT / 5 / Support Equipment and Facilities										P-1 Item Nomenclature:		
Program Elements for Code B items:										PRODUCTION BASE SUPPORT (CA0100)		
Code:										Other Related Program Elements:		
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	591.9	3.6	2.8	1.7	3.3	3.3	3.6	3.5	3.8	3.8	0.0	621.2
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	591.9	3.6	2.8	1.7	3.3	3.3	3.6	3.5	3.8	3.8	0.0	621.2
Initial Spares												
Total Proc Cost	591.9	3.6	2.8	1.7	3.3	3.3	3.6	3.5	3.8	3.8	0.0	621.2
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: This program provides for Production Support and Equipment Replacement (PSR) of Government owned equipment used in production and production testing of missile systems or missile components. Funds are used to establish, modernize, expand or replace Army-owned industrial facilities.

JUSTIFICATION: The FY99 request includes replacement/rehabilitation of existing equipment or instrumentation and modernization of test facilities at the Redstone Arsenal Technical Test Center and White Sands Missile Range. It is also essential in sustaining the Army's missile warhead production capability, eliminating safety hazards, etc., at the Iowa Army AMMO Plant.

Exhibit P-5, Weapon Missiles Cost Analysis		Appropriation/ Budget Activity/Serial No. MISSILE PROCUREMENT / 5 / Support Equipment and Facilities		P-1 Line Item Nomenclature: PRODUCTION BASE SUPPORT (CA0100)		Weapon System Type:		Date: February 1998		
ID	Missiles Cost Elements	FY 96		FY 97		FY 98		FY 99		
		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
	39X2169 PSR, Redstone Arsenal (RARE), Thiokol Corp, producers of Solid Rocket Motors, closed its Redstone facility in 1996. Funds were required to assess and establish liability for contamination.	1316								
	93X5069 PSR, White Sands Missile Range Replacement and initial purchase of equip and instrumentation used in production testing of missile systems and components.	800		1095		1000		1000		
	93X5071 PSR, Redstone Ars Tech Test Ctr. Equipment is required for modernization of the Redstone Arsenal Technical Test Center (RTTC) and equipment in the Dynamic, Static/ Electronic Component Test Branches.	200		414		250		275		
	3902335 PSR, Redstone Arsenal Maintained and upgraded Missile Automatic Test Equipment used in depot level maint. of various missile systems.	383								
	6935333 PSR, Iowa Army Ammo Plant (IAAP) Funds are essential to sustain the Army's missile warhead production capability, eliminate safety hazards by replacing worn equipment and rehabilitation of facilities.	149		200		2024		1983		
TOTAL		\$2,848.000		\$1,709.000		\$3,274.000		\$3,258.000		